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ABSTRACT

This evaluation report examines effects of integrating 39 students with mental retardation in 5 elementary and 2 middle schools in Madison (Wisconsin) during the 1988-89 school year. Also reported is the integration of 20 students into the high school program. Data used included interviews and questionnaires with 16 general and 9 special eduction teachers, telephone interviews with parents of 36 of the integrated students, sociometric data from 13 of the classrooms, attitudinal responses of sixth graders at one school, and a questionnaire completed by parents of nonhandicapped children at one school. Thirty-nine findings are summarized. These include: the integrated students were generally accepted by their classmates, with 61 percent receiving sociometric ratings near the mean and 29 percent in the socially "neglected or rejected" range; integrated students had greater success in achieving eight Individualized Education Program goals than did matched students in traditional programs; parents of integrated students were generally satisfied, with 85 percent saying they would choose an integrated program over a more traditional model; 90 percent of parents of nonhandicapped students believe that academic and behavioral standards have been maintained; and general education teachers identified positive social effects for nonhandicapped students. (DB)

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Summary Evaluation Report:

Integration of Students with Mental Retardation

By Barbara E. Marwell, Ph.D.
Madison Metropolitan School District

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SUMMARY EVALUATION REPORT:

INTEGRATION OF

STUDENTS WITH MENTAL RETARDATION

BY

BARBARA E. MARWELL, PH.D.

RESEARCH AND EVALUATION TEAM

MADISON METROPOLITAN SCHOOL DISTRICT
MADISON, WISCONSIN

E. JAMES TRAVIS, SUPERINTENDENT

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NOVEMBER 1990

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INTRODUCTION

In the 1987-88 school year, 20 students with mental retardation at Van Hise Elementary School were integrated into general education classes in a pilot project designed to explore an expanded version of programming for students in the least restrictive environment. An evaluation of the first year of that pilot was presented to the Board of Education in October 1989.

During the 1988-89 school year, integration models were implemented at four additional elementary schools (Falk, Huegel, Lowell and Schenk) and two middle schools (Jefferson and Van Hise). Van Hise Middle School became an official part of the integration pilot as students who had been integrated at Van Hise Elementary moved to the next grade level. At Huegel Elementary School a "home school model," was being piloted. Here children with retardation attended their neighborhood school, rather than being transported to the cluster school which served a wider attendance area. At Falk, Lowell and Schenk Elementary Schools and at Jefferson Middle School, teachers had initiated efforts to explore the feasibility of more extensive integration with selected students and general education staff. In order to reflect the diversity of integration models in the MMSD and to provide a broader base of information for long-range program planning and policy decisions, all of these schools were included in the integration evaluation for 1988-89.

In addition to the integration efforts at the elementary and middle schools described above, a new program for students with mental retardation was begun at West High School during the 1988-89 school year. This program combined school and community-based programming, with student's schedules arranged so that half the students were in the community and half in the school at any given time. All students with retardation at West High were placed in regular education homerooms and in physical education classes. Students were also programmed into selected regular education classes, as appropriate. Because of limited evaluation resources, the West High School program was not included in the original evaluation design. However, in the spring of 1990, it was decided to conduct a limited evaluation of the high school program in order to provide a K-12 perspective on integration.

The major focus of this report is the integration of 39 elementary and middle school students during the 1988-89 school year at five elementary (Falk, Huegel, Lowell, Schenk and Van Hise) and two middle schools (Jefferson and Van Hise). The 39 students were integrated for at least 50 per cent of the school day into 16 general education classes from kindergarten through 8th grade. Descriptive characteristics of these children are shown below.

Grade Levels

Kindergarten	5	3rd	6	6th	8
1st	4	4th	4	7th	3
2nd	4	5th	2	8th	3

Levels of Retardation		Communication Handicap		Physical Handicap	
Mild	20	None	4	None	8
Mild/Moderate	2	Mild	11	Mild	15
Moderate	11	Moderate	11	Moderate	12
Moderate/Severe	4	Moderate/Severe	7	Moderate/Severe	2
Severe	2	Severe	6	Severe	2

The West High School program, which served 20 students and involved 19 general education teachers in discussed in the last section of this report. Because West High School was not included in the original evaluatin design, the data collected at that site was less extensvie than the data from the elementary and middle schools. Where comparisons can be made, they are reported in the section on the high school.

EVALUATION DESIGN

This evaluation was designed to gather data on student outcomes, staff and parent perceptions of the impact of the integration on both handicapped and non-handicapped students, and the experiences of the teachers participating in the programs. The population and data collection techniques included:

Teacher Attitudes/Perceptions: At the elementary and middle schools, semi-structured in depth interviews were conducted with 16 general education* and 9 exceptional education teachers. The interviews included teacher assessments of the social and academic experiences of the integrated students, as well as the teacher's own experiences as a participant in integration. All teachers also completed the Integration Impact Questionnaire, a Likert-type attitude scale, which was also used in the 1987-88 evaluation.

All data on the high school program was gathered from teachers: through a joint interview with the two special education teachers and questionnaires for the regular education teachers. Thirteen of the 14 classroom teachers and one of the five physical education teachers surveyed completed the questionnaires.

Handicapped Children's Assistants' Attitudes/Perceptions: 17 HCA's at elementary and middle schools completed a semi-structured questionnaire describing their experiences and responsibilities in integration. The HCA's also completed the Integration Impact Questionnaire.

Sociometrics: Sociometric ratings were completed by the classmates of 31 of the 39 integrated children at elementary and middle schools. Two middle school teachers were not able to administer the sociometric ratings; one elementary teacher chose not to administer it because of possible negative side-effects.

IEP Ratings: Ratings of success in achieving IEP goals were obtained for the 39 integrated students at the elementary and middle schools and a matched group of students in more traditional programs. Students were matched on age/grade, level of retardation, level of communication handicap and level of physical handicap. The ratings were completed by each student's EEN teacher. Teachers were blind to the purpose of the ratings.

General Education Parents: Van Hise Elementary School: Parents of general education students at Van Hise Elementary School had completed a mail questionnaire on the impact of integration on their non-handicapped students in Fall 1987 and Spring 1988. A third round of this questionnaire was mailed to all parents of non-handicapped students at Van Hise elementary school in Spring 1989. Completed questionnaires were received from 166 of the 211 families, a response rate of 78.7 per cent.

Parents of Integrated Students: Telephone interviews with the parents of integrated students at the elementary and middle schools assessed parental perceptions of their child's integration experience, as well as general attitudes toward the integration model. Telephone interviews were completed with 34 parents. Two parents choose to respond in writing. Three parents could not be contacted by telephone and did not respond to a mailed questionnaire.

*One general education teacher was not interviewed because she was on maternity leave during the interviewing period.

I. IMPACT ON STUDENTS WITH RETARDATION
SOCIAL OUTCOMES: STAFF PERCEPTIONS

Peer Relationships

Perhaps the major objective of integration is to provide opportunities for children with retardation to interact with age-appropriate peers in normal settings. Through this interaction, advocates argue, children with retardation will observe and model more appropriate behaviors, participate in a greater range of social activities leading to the development of meaningful peer relationships, and learn to interact with the heterogeneous population with whom they will be spending their adult lives. For the non-handicapped children, integration is expected to provide opportunities for reducing fears of handicapped persons, learning to relate to a more diverse set of peers and preparation for living and working with handicapped persons in adult life.

Opponents of integration argue that retarded children are likely to experience teasing and rejection in the integrated environment and have diminished opportunities for social interaction when they are deprived of peers on their own "functional" level. Moreover, those opposed to integration believe that a dubious quality of social interaction is purchased at the expense of instruction in skills required for successful community living.

Previous Findings

Data from the evaluation of the integration of handicapped children at Van Hise Elementary School during the first year of the pilot (1987-88) indicated that children with retardation did not experience inordinate rejection by peers as a result of integration. Moreover attitudes of non-handicapped children became more positive as a result of year-long opportunities to interact. Sociometric scales, administered at the beginning and end of the pilot year (1987-88), indicated that peer acceptance of 14 of the 17 children with retardation either increased or remained the same. By the end of the pilot year, 9 of the 17 children (53%) were within at least the average range of acceptance by peers.

Integration also had a positive impact on the non-handicapped children at Van Hise Elementary School. By the end of the pilot year, the non-handicapped classmates of children with retardation expressed more positive attitudes toward people with retardation than did students in classrooms at Van Hise and at a comparison school where there were no children with retardation. This is consistent with the literature which suggests that opportunities to interact with people from "different" social groups tend to produce more positive attitudes. (e.g., Voeltz 1980)

Current Findings

In order to explore the consistency of our findings regarding the social position of the children with retardation, sociometric data were collected in the spring of 1989 for 31 of the 39[1] integrated children. Attitudes of the

[1]Sociometric data were not obtained for 8 children. One kindergarten teacher was concerned about unintended negative effects of a sociometric scale and chose not to administer the scale. Two 6th grade teachers were not able to complete the sociometrics.

non-handicapped students toward children with retardation were measured at one of the middle schools involved in integration. These data are reported in Section IV, Effects on Non-Handicapped Children.

Sociometric Findings

Sociometric results for the 1988-89 year were somewhat more positive than those found in the pilot year at Van Hise Elementary School. As seen in Table 1, a greater proportion of children earned sociometric ratings within the average or above average range for their classrooms and a smaller proportion were in the below average category.

Table 1
Sociometric Ratings
Van Hise Elementary 1987-88 and 6 Schools 1988-89

Rating	Van Hise 1987-88 Per Cent of Students (N=17)	6 Schools 1988-89 Per Cent of Students (N=31)
Above Class Average (< + 1 SD)	6%	10%
Within Average Range (-1 to +1 SD)	47%	61%
Below Class Average (>- 1 SD)	47%	29%

Longitudinal sociometric data are available for 13 of the children. A comparison of ratings for the two years indicates that five children have improved their sociometric positions, five have worsened and three remained essentially the same. Although the numbers are too small to draw conclusions, anecdotal data suggest that changes in ratings reflect both significant changes in the childrens' behaviors and differing classroom atmospheres. Teachers' attitudes toward integration in general, as well as toward the specific children, appear to affect the child's sociometric position in the class. Teachers are significant models for children's attitudes.

Characteristics of Accepted and Rejected Children

As part of the semi-structured interviews, general and exceptional education teachers were asked to describe the social and behavioral characteristics of the integrated students. These descriptions were analyzed, in relation to the sociometric ratings, to identify characteristics associated with the social response of peers. The teachers' descriptors of the children with positive sociometric ratings are characteristics that could describe any well-liked child: pleasant, cheerful, kind, friendly, responsive, non-threatening, not critical and likely to initiate interaction. The ability to participate in age-appropriate activities, including an interest in sports for boys, was frequently noted.

A second group of children with positive sociometric scores are those with moderate to severe retardation who are the recipients of structured activities (e.g., Circle of Friends) designed to include them in the life of the

classroom. These children often become classroom "pets" (an unintended side effect) and are likely to receive the highest sociometric scores in the group.

Rejected children appear to be of three types: those with significant aggressive or anti-social behavior (pushing, pestering, crying, complaining, spitting, whining, sneaky, sassy and bossy); those who are severely withdrawn or unresponsive to peer approaches and those with self-stimulating autistic behaviors or unpredictable behavior, usually involving tantrums.

Other qualities identified by teachers as barriers to positive peer relationships included significant dependency on adults and aversive physical characteristics such as poor personal hygiene, protruding tongue and thick glasses. Lack of skill or interest in sports were seen as interfering with the development of peer relationships for boys.

There were few differences between the general and exceptional education teachers in the student characteristics they identified as enhancing peer interaction. EEN teachers, however, were more likely to identify physical characteristics and autistic-like behaviors as barriers.

Patterns of Social Interaction

The sociometric scal provided a numerical rating of the levels of acceptance of the children with retardation by their non-handicapped peers. Another perspective is provided by data from the general education teacher interviews. Teachers estimated the amount of time the children with retardation spent in three types of interaction with peers: mutual interaction, receiving help and just being in the environment. Based on the teacher estimates of interaction time, the children were characterized as to their primary interaction patterns.

Mutual Interactors: These are children who teachers describe as engaging in mutual interaction patterns at least 70 per cent of the time. (N=7)

Emerging Interactors: These children's social skills are "emerging". They engage in positive mutual interaction at least one-third of the time, but spend substantial amounts of time receiving help or in solitary situations. These children may have some negative behaviors which lead other children to avoid them. (N=10)

Pets: This is a group of moderately to severely impaired children. Their primary interaction pattern consists of receiving help from peers who are described as "mothering" them. They are responsive to peers and are described by teachers as well liked. (N=8)

Wallflowers: These children never initiate interaction and are minimally responsive when peers initiate. This group includes both severely impaired children whose environmental awareness and responsiveness is minimal and very withdrawn children with mild levels of retardation. Teachers describe non-handicapped children as initially making overtures to these children. However, in the absence of responsiveness from the child with retardation, peers gradually stop initiating interaction. (N=10)

Porcupines: This group of children engage in significant amounts of negative behavior (tantrums, spitting, self-stimulation, aggressive or sneaky behavior toward peers). Classmates tend to keep their distance, with some of the younger non-handicapped children reportedly upset by the behaviors. (N=4)

Table 2 shows the number and percentages of children in each of the interaction groups, as well as a comparison between teacher-described interaction patterns and sociometric ratings by students. The mutual interactors, emerging interactors and pets include 25 of the 39 children (64%). These children clearly have had positive social interactions as a result of integration. The percentage of children in these three "positive" social groups is remarkably similar to the percentage of children who received average or above average sociometric ratings from their classmates. Similarly, the proportion of children in the wallflower and porcupine groups correspond to the children with below average sociometric ratings. These are children who will require considerable work on social skills to expand their opportunities for positive social interaction with peers.

Table 2
Comparison of Interaction Patterns and Sociometric Ratings

Interaction Patterns			Sociometric Ratings*		
Category	N	%	Category	N	%
Mutual Interactors	7	18%	Above Average	3	10%
Emerging Interactors	10	26%	High Average	5	16%
Pets	8	20%	Low Average	14	45%
Wallflowers	10	26%	Below Average	9	19%
Porcupines	4	10%			
Total	39	100%	Total	31	100%

*Above Average = ratings above +1SD; High Average = ratings between the class mean and + 1 SD; Low Average = ratings between the class mean and -1 SD and Below Average = ratings lower than -1SD..

Perspective of the EEN Teachers

There is remarkable consistency between the perceptions of the general and exceptional education teachers in the identification of the quality of peer interaction. Although the interview questions were phrased quite differently, EEN teachers identified two-thirds of their students as having made significant gains in peer relationships. One-third of the children were described as having friends; one-third as having learned to interact with and be responsive to peers. No gains in social skills were seen for one-third of the children -- the wallflowers and porcupines.

Ratings of Social Interaction

In addition to teacher reports on the social experiences of the integrated students, ratings of several aspects of social interaction were obtained from

the Integration Impact Questionnaires completed by regular education teachers, EEN teachers and Handicapped Children's Assistants. Since this questionnaire was also administered to teachers at Van Hise Elementary in 1988, it provides comparison data.

Table 3 (following page) presents data on a series of questions about the effects of integration on the social experiences of the handicapped students. Data are presented for general and EEN teachers and HCA's, for Van Hise Elementary for two years and for the seven schools for 1988-89. Respondents were asked to respond to each question on a 4-point scale, where 4 = strongly agree and 1 = strongly disagree. For each group of staff, the table shows the combined percentages responding "strongly agree" and "agree" to each of the items, as well as the numerical value representing the over-all response of that staff group.*

As can be seen from the table, all staff groups generally rate integration as successful in terms of social interaction, with teachers somewhat more positive than HCA's. The only exception to this generally positive response is among regular education teachers rating students with moderate/severe retardation. Only 40 per cent of this group rated social integration for moderate/severely impaired students as successful; one-third did not respond to the item, leaving slightly more than one-fourth who question the benefit of integration for students with more severe disabilities.

Among the Van Hise staff, responses were noticeably more positive in 1989 than in 1988. This is consistent with anecdotal reports of teacher reactions. However, the reader is cautioned that the number of respondents in the Van Hise 1989 group is small and the results should not be overinterpreted.

Teacher Perceptions: Social-Emotional Outcomes

Critics of integration raise a number of questions regarding the emotional impact of the integration experience on the students with retardation. The Integration Impact Scale assessed staff perceptions of various indicators of stress, anxiety and frustration for the integrated students. The data are shown in Table 4. The findings on these items are consistent with those reported for ratings of social interaction. Both general and special education teachers see very few negative emotional impacts; HCA's are more likely to identify problems than are teachers and Van Hise teachers express more positive attitudes in 1989 than in 1988.

Although we did not obtain objective measures of the changes in the children's behavior over time, teachers anecdotal descriptions provide one view of the impact of integration. The most salient changes, from the point of view of the general education teachers, were the increasing willingness of the children with retardation to participate in group activities.

> *A 2nd grader:* "She is so much a part of the group. She does what others are doing. She glows with pride over her accomplishments."

*The numerical rating is the sum of the number of respondents answering "strongly agree" multiplied by 4; the number answering "agree" multiplied by 3; the number disagreeing multiplied by 2 and the number strongly disagreeing multiplied by 1. The number reflects the "strength" of the opinions.

TABLE 3
INTEGRATION IMPACT SCALE
STAFF RATINGS OF SOCIAL OUTCOMES
Van Hise 1988 & All Schools 1989

	N=13 Van Hise Reg. Ed 1988		N=3 Van Hise Reg. Ed 1989		N=15 All Schools Reg Ed 1989		N=9 All Schools EEN 1989		N=17 All Schools HCA 1989	
	%Agree	Rating	%Agree	Rating	%Agree	Rating	%Agree	Rating	%Agree	Rating
Social Integration: EMR-Successful	62	3.33	80	3.50	93	3.71	100	3.56	81	3.46
Social Integration: TMR Successful	23	2.22	60	3.67	40*	3.00	89	3.50	88	3.00
Improved social skills	46	2.60	100	3.80	93	3.33	100	3.56	69	3.31
Increased interaction --in school	69	3.18	100	3.60	100	3.80	100	3.67	81	3.57
Increased interaction --out of school	23	2.30	80	3.00	33*	2.75	67	2.89	31	2.50
Developed social relationships	46	2.88	80	3.20	73	3.00	100	3.22	69	2.85
Greater acceptance by peers	31	2.50	60	4.00	67	3.36	89	3.63	75	3.33
Greater awareness of environment	46	3.00	80	3.50	93	3.36	89	3.56	88	3.27
Teased by peers	31	2.30	0	1.60	0	1.36	0	1.67	19	1.93
Socially Isolated	31	2.30	0	1.60	0	1.58	0	1.67	19	1.93
Peer interaction only when structured	38	2.50	0	1.00	0	1.64	0	1.67	38	1.93

* This question received a high proportion (at least 1/3) of "Don't Know" responses.

TABLE 4
INTEGRATION IMPACT SCALE
STAFF PERCEPTIONS OF BEHAVIORAL/EMOTIONAL OUTCOMES
Van Hise 1988 & All Schools 1989

	N=13 Van Hise Reg. Ed 1988		N=3 Van Hise Reg. Ed 1989		N=15 All Schools Reg Ed 1989		N=9 All Schools EEN 1989		N=17 All Schools HCA 1989	
	%Agree	Rating	%Agree	Rating	%Agree	Rating	%Agree	Rating	%Agree	Rating
Improved behavior	46	2.64	100	3.80	73	3.42	100	3.44	69	3.54
Physical fatigue	54	2.55	0*	1.80	0*	1.67	0	1.67	44	2.54
Overly stressed	54	2.83	0*	1.60	0*	2.00	0	1.67	31	2.39
Frustrated re. keeping up with peers	33	2.44	0*	1.60	0*	1.46	0	1.78	44	2.31
Negative emotional reactions to differences	23	2.22	0*	1.60	0*	1.25	0	1.78	25	2.00
Distracted by classroom stimulation	68	2.64	0*	1.40	0*	1.54	0	1.88	25	1.93

*Although none of the regular education teachers agreed with these statements, there were several "Don't Know" responses to each of these questions. There were no "Don't Know" responses from EEN teachers.

A 3rd grader: "She used to be an observer. Now she asserts herself and models the behavior of others."

A 4th grader: "At the beginning of the year he didn't have any idea of how to function in a group, how to make contact with peers. Now he fits it, initiates with peers, although he still needs work on self-care."

A 3rd grader: "She knows she's accepted and is willing to take risks and try new things."

A 1st grader: "He wants to learn; he feels he's part of the room and has been invited home by others;"

EEN teachers describe similar outcomes but tend to view it in terms of emotional growth rather than group participation. One-third of the children are characterized by EEN teachers as having increased their self-confidence or self-esteem, show a greater willingness to take risks and are "just happier."

Behavioral Outcomes

Disruption of classroom activities by the inappropriate behaviors of the children with retardation was one of the major concerns raised in anticipation of integration. We have mixed findings on this issue. Although only a small proportion (13%) of the general education teachers reported that the behaviors of the integrated students were upsetting or distracting to the non-handicapped children in the classroom, almost half the Handicapped Children's Assistants identified these as problems. Several teachers, however, did question the policies regarding removal of a disruptive child from the classroom. General education teachers may want children removed sooner than the EEN teachers feel is appropriate.

On the Integration Impact Scale, all of the EEN teachers and 70% of both general education teachers and HCA's rated the integrated students as showing improved behavior over the year. In the general education teacher interviews, positive behavioral change, for the integrated children, was the second most frequently mentioned positive outcome (after increased participation in group activities). EEN teachers reported major gains in behavioral control (decreases in tantrums and other inappropriate classroom behavior) for one-quarter of the children. Only one of the 39 children was described (by a general education teacher) as having deteriorated in behavior over the year.

II. IMPACT ON STUDENTS WITH RETARDATION
INSTRUCTIONAL OUTCOMES: STAFF PERCEPTIONS

The education of students with mental retardation is guided by Individualized Educational Plans (IEP) which specify instructional goals for the year. The EEN teacher, in conjunction with the child's parent, develops the IEP. Other staff may participate as appropriate. The EEN teacher is responsible for assuring that the student's daily program addresses IEP goals.

Data on the instructional outcomes for the integrated students was obtained from four sources: (1) ratings of the IEP goals made by the EEN teachers, (2) anecdotal reports from general and EEN teachers; (3) ratings of academic outcomes by teachers and HCA's on the Integration Impact Scale and (4)information obtained in interviews with the parents of the integrated students.

Academic Progress

1. The EEN Teacher's Perspective

From the perspective of the EEN teachers, academic progress was a significant outcome of integration. Almost all of the students who were mildly retarded and several of the students with moderate retardation were rated as having made significant gains in core academic skills during the year. Moreover, teachers frequently noted the impact of the non-handicapped students in providing models for learning.

> *A Kindergartener:* "He looks at books, writes his name, understands numbers."
>
> *Two 4th graders:* "He's learning more social studies. The cooperative learning groups make him participate."
>
> "She's acquiring lots of academic skills; practices reading and writing all the time."
>
> *Two second graders:* He's very interested in learning [science and social studies]. He asks appropriate questions, picks up enough to participate in the group."
>
> "She's learned phonics and inventive spelling. She's begun to value spelling because she sees others doing it. We wouldn't have had this in the MR room."

In addition to progress in academic areas, several teachers noted improvements in work habits. Children were reported as showing greater on-task behavior, "He's able to focus more;" improved ability to work independently for longer periods of time and increases in other appropriate classroom behavior such as raising hands before speaking.

IEP Outcomes

The anecdotal descriptions of student progress are supported by the IEP ratings. EEN teachers were asked to rate student progress on IEP goals using a 7-point scale. Integrated students were compared with a matched group of students enrolled in more traditional MR programs. The students were matched on age/grade, gender, level of retardation, level of communication skill and physical handicap. Each child was rated by his/her own EEN teacher. Teachers making the ratings were not aware that the ratings were being used to compared IEP accomplishments of integrated and non-integrated students.

Table 5 shows the average rating on IEP academic goals for the integrated and non-integrated groups. As can be seen from the table, the average ratings for both integrated and non-integrated students are generally above the mid-point of the scale. However, integrated students have higher ratings on all academic goals, with three of the differences reaching statistical significance.

Table 5
EEN Teacher Rating of Success in Achieving IEP Goals
Comparison of Integrated and Non-Integrated Students
7-Point Rating Scale

IEP GOAL AREA	Average Rating Integrated Students N=39	Average Rating Non-Integrated Students N=36
Math	4.9	4.5
Reading	4.9	4.2
Writing	4.8*	3.9*
Language Comprehension	5.3*	4.5*
Expressive Language	4.6	4.5
Receptive Language	5.4*	4.7*
Communication	5.2	4.6
Computers	4.9	4.9

*Differences between integrated and non-integrated students are significant at the $p > .05$ level.

Functional Skills

One of the major theoretical criticisms of integration is that it compromises instruction in functional skills. Our data do not support this hypothesis. Although the non-integrated students are slightly more likely to have goals in the four functional areas, the differences are not large. In terms of success in meeting IEP goals, integrated students earned higher average ratings on IEP goals in all functional areas compared to students in more traditional programs, although none of the differences were statistically significant. (Table 6)

Table 6
IEP Functional Skill Goals - Integrated and Non-Integrated Students

IEP GOAL AREA	Per Cent of Students with IEP Goals in Category		Average Goal Rating	
	Integrated	Non-Integrated	Integrated	Non-Integrated
Community	55%	63%	5.0	4.6
Domestic	45%	47%	5.1	4.4
Self-Care	47%	58%	4.7	4.6
Vocational	45%	37%	5.1	4.4
	N=39	N=36	N=39	N=36

On the Integration Impact Scale (Table 7) no general or special education teachers agreed with the statement that students who are integrated have less opportunity to learn functional skills. However, one-third of the HCA's expressed concerns in this area.

General Education Teacher's Perspective

The philosophy of integration states that students are not placed in general education classes purely for socialization but in order to achieve identified instructional objectives. Although special education teachers articulate the instructional goals in the students' IEP's, general education teachers are often not familiar with these IEP goals and experience difficulty in assessing student progress. Of the 16 general education teachers, only 11 (all at the elementary level) considered themselves familiar enough with the students' instructional programs to assess progress.

General education teachers were able to evaluate the instructional progress of 16 of the 39 integrated students. Nine of the students were rated as having made good instructional progress during the year; seven as having made some gains. Teachers were most familiar with the progress of children who were able to engage with the regular classroom curriculum, albeit at a slower learning rate. As the degree of retardation increased, and the IEP goals became more functional, the teachers had less information about student progress.

Staff Ratings of Instructional Outcomes

The Integration Impact Scale provided another measure of instructional outcomes. Table 7 shows the staff ratings of academic integration for EMR students, parallel instructional programs for TMR/SMR students, progress in work habits and the impact of integration on instruction in functional skills. Data are presented for Van Hise 1988, Van Hise 1989, and for general education teachers, special education teachers and HCA's at all seven schools in 1989. Responses were on a four-point scale, where 4 = strongly agree and 1= strongly disagree. Percentages and average ratings are presented for each group.

TABLE 7
INTEGRATION IMPACT SCALE
STAFF RATINGS OF ACADEMIC OUTCOMES
Van Hise 1988 & All Schools 1989

	N=13 Van Hise Reg. Ed 1988		N=3 Van Hise Reg. Ed 1989		N=15 All Schools Reg Ed 1989		N=9 All Schools EEN 1989		N=17 All Schools HCA 1989	
	%Agree	Rating	%Agree	Rating	%Agree	Rating	%Agree	Rating	%Agree	Rating
Academic Integration EMR--Successful	23	2.57	80	3.50	87	3.36	78	3.38	75	3.50
Parallel Instruction TMR--Successful	15	2.00	60	3.67	47	3.71	78	3.57	69	3.36
Less Opportunity to learn functional skills	54	3.11	0*	1.00	0*	1.43	0	1.63	31	2.33
Improved work habits	46	2.70	100	3.80	77	3.25	89	3.33	50	3.46

* This question received a high proportion (at least 1/3) of "Don't Know" responses.

As can be seen from the table, large majorities of both general and special education staff rated the academic integration of EMR students as successful. For TMR students, although substantial majorities of both EEN teachers and HCA's rate parallel instruction as successful, only 47 per cent of regular educators selected this option. As with the findings on social integration, approximately one-third of the regular education teachers responded "don't know" to this question. The higher average ratings for TMR as compared to EMR students reflect the fact that respondents who answered the TMR question were more likely to respond "strongly agree," while those who answered the EMR question chose "agree". When general education teachers felt they had enough information to rate the effectiveness of integration for TMR students, they tended to be very positive about the experience.

Finally, more than three-quarters of all teachers, but only half the HCA's agreed that students' work habits had improved during the year. This is consistent with an over-all trend in these data for teachers to have more positive views of the impact of integration than do HCA's. A second trend, an increase in positive responses among general education teachers at Van Hise Elementary during the second year of integration, is also apparent in the data on instructional outcomes. However, as with the data in Table 3, the reader is cautioned regarding the small number of cases for Van Hise Elementary in 1989.

Some Doubts About Integration for Academics

Despite the fact that general education teachers are able to identify positive academic outcomes for the integrated children, they have concerns about integration as a service delivery model. As the level of handicap becomes more severe, these questions are raised more frequently. Two major issues arise:

Time Wasted? A number of general education teachers question the viability of a program when academic content is above the child's developmental level.

> *A middle school teacher:* "I dont know whether they're getting anything out of being in my room. Are they wasting time on maps and globes when they could be practicing daily living skills?"
>
> *An elementary teacher:* "His reading skills are so far below the others, he can't participate. Sometimes he makes inappropriate comments in discussion and the other kids react negatively."

Reduced Opportunity for Daily Review: Five of the general education teachers and one special education teacher believed that opportunities for repetition and daily review of skills, essential to retention for students with retardation, had been reduced as a result of integration. Although we have no data on the amount of time students spent in this type of review, the data on achievement of IEP goals (Table 1) does not suggest their academic learning was less successful than similar students receiving instruction in more traditional service delivery models.

III. SOCIAL AND INSTRUCTIONAL OUTCOMES
THE EEN PARENTS' PERSPECTIVE

Parents' Expectations

As a group, the parents of the students with retardation approached integration with caution. Although some had advocated for integration and were enthusiastic about the plans, many had concerns as to the appropriateness of this program for their children. A slight majority of the parents (55%) had very positive attitudes in anticipation of integration. They were satisfied with the advance plans for their children, found the transition into the program to be smooth and did not anticipate any problems. The remaining parents were equally divided among those who were somewhat satisfied (20%) with the advance planning, found the transition adequate and anticipated some problems; and those who were somewhat dissatisfied (25%) with the advance plans, reported some problems with transition into the program and anticipated some problems for their children.

Increased social interaction with age-appropriate peers was the major positive benefit expected by parents. When asked what they hoped the integration would accomplish for their children, 80 per cent mentioned greater opportunities for social experiences and for developing friendships. No other expected outcomes were mentioned by more than a few parents. In terms of problems, parents were concerned about the possibilities of teasing and rejection (21%); stress and anxiety (15%); decline in the quality of the child's instructional program (15%) and fatigue (8%).

Parent Perceptions of Outcomes

The end of year parent responses were somewhat more positive than reactions at the beginning of the year. Overall, 52.5 per cent rated the program as very successful for their child, and 40 per cent saw it as somewhat successful. Two parents (5%) were neutral about the integration and only one rated the child's experience as "somewhat unsuccessful". In this latter case, the parent noted that the perceived problems were related to the specific teacher rather than to integration as a service delivery model.

Improvements in self-esteem and self-care, responsiveness to feedback from others and more interest in the world around them were the most frequently mentioned positive outcomes reported by parents.

> "He feels better about himself -- stronger, older, more independent."
>
> "He seems more grown up, not like a 2-year old, although he can still be obnoxious. If he does inappropriate things the regular ed students tell him it's wrong. Peer pressure is more effective than the teacher."
>
> "He's more aware of his looks, more polite, more aware of the world around him."

Parent Ratings of Progress on IEP Goals

Parents' evaluations of progress in meeting IEP goals were obtained from parent ratings of thirteen content areas. Table 8 shows the average rating, on a 10-point scale, for each of the thirteen goal areas. Table 9 shows the average ratings for individual students. As can be seen in Table 8, mean ratings for all goal areas are above the theoretical mid-point (5.5) of the scale. Parents gave higher ratings to the functional skill areas, social skills, language development, academics and physical skills than to the behavioral domains, including the behaviors associated with classroom performance. Ratings of individual students suggest that parents viewed their children as having made good progress during the year (Table 9). Three-quarters of the parents rated their children above the theoretical mid-point of the scale (5.5). The average rating (6.42) was almost one point above the mid-point.

Table 8
Parent Ratings of Progress in IEP Goal Categories
10-point Rating Scale

Goal Category	Average Rating	Number Rating Goal
Vocational/Pre-Vocational	7.39	18
Community	7.15	27
Domestic	6.96	26
Social Skills	6.91	34
Language Skills	6.81	32
Academic Skills	6.79	33
Physical (Large Motor) Skills	6.78	32
Following Directions	6.40	36
Appropriate Behavior	6.38	34
Paying Attention	6.28	36
Work Completion	6.25	32
On Task	6.15	34
Fine Motor Skills	6.14	36

Table 9
Parents' Ratings of Individual Student IEP Progress
10-Point Rating Scale

Average Rating	Number of Students	Per Cent of Students
Below Mid-Point of Scale		
Under 4.0	3	8
4.0 - 5.5	6	17
Between Scale Mid-Point and Observed Mean		
5.51 - 6.42	8	22
Above Observed Mean		
6.43 - 7.43	12	33
Over 7.43	7	19
TOTALS	36	99%

Parents' Perceptions of Problems

In anticipation of integration, parents identified four potential problem areas: negative social interactions, stress and anxiety, decline in the quality of the instructional program and fatigue. Except for fatigue, these were the problems identified by the largest numbers of parents at the end of the school year. (Table 10) Three additional problems (the bus, dependence on adults and no programs for developing friendships) were each mentioned by small numbers of parents. It should be noted that no problem was identified by more than 22 per cent of the parents and more than half the parents did not mention any problems experienced by their children.

Table 10
Problems Identified by Parents of Integrated Students

Problem	Number Mentioning N=36	Per Cent*
Stress/Frustration (From high expectations, difficult work, not keeping up with peers, perceived differences from peers)	8	22%
Instructional (IEP goals neglected; inappropriate programming)	7	19%
Negative Social Interactions (Teased, rejected, learned bad language)	6	17%
Bus	4	11%
Overly Dependent on HCA	3	8%
No Staff Help in Developing Friendships	2	6%
No Problems Mentioned	20	56%

*Problems do not total 100% since respondents could mention more than one problem.

Parents' Questions

Although 92.5% of the parents rated their children's integration experiences as very or somewhat successful, and 85% would choose an integrated program over a more traditional model, many parents raised questions regarding the most appropriate amount of integration for their child. Most of the parents recognized and appreciated the positive social impact that integration had on their children. However, many parents suggested that less time in integrated classrooms and more individualized instruction to meet the child's unique needs

would be desirable. Individualized integration is a common theme. Parents of several of the younger children expressed hesitancy over integration in the long-term. The worry about how their children will fare as they get older and the gap in skills increases. Parents may be more worried than the children's' experience confirms: approximately one-third of the parents noted that although they had concerns about integration, their children seemed happier in school during the integration year than they had been in previous years. Only three parents commented on their children's resistance to attending school as a result of integration.

IV. IMPACT ON NON-HANDICAPPED STUDENTS

Perceptions of General Education Parents: Van Hise Elementary School

The integration of 20 students into general education classrooms at Van Hise Elementary School in the first year of the pilot raised considerable concerns among the parents of general education students as to the over-all impact of this program on the school. In response to these concerns, the Board of Education provided an extra regular teacher allocation at Van Hise and requested an evaluation of the integration pilot. The evaluation included three surveys of the parents of Van Hise general education students: Fall 1987, the beginning of the first year of integration; Spring 1988, the end of the first year; and Spring 1989, the end of the second year. The surveys assessed parent attitudes toward integration, as well as their perceptions of the impact of integration on the non-handicapped students and on the general education teachers at Van Hise.

Previous Findings

Parent concerns were much greater in the Fall of 1987, in anticipation of the integration, than they were in Spring 1988, the end of the school year. Moreover, at the end of the year, parents of students who were in integrated classes had more positive attitudes toward integration than did parents of students in non-integrated classes (see Figure 1).

In the Fall of 1987, a slight majority of parents at Van Hise expressed support for the principle of integration and large numbers were concerned about the extra responsibilities for classroom teachers (70%) and the potential for classroom disruption (53%). By the end of the first year, the number of parents supporting the principle of integration had increased to two-thirds, and 70 per cent could identify benefits for their non-handicapped children. However, approximately one-third of the parents continued to express concerns that the integration had disrupted instruction, decreased individual attention for non-handicapped children, created psychological distress for non-handicapped children and increased the stress on teachers.

Current Findings

Results of the Van Hise parent survey conducted in the spring of 1989 generally follow the trends which emerged during the 1987-88 school year. Where changes occurred they tended to be in the direction of more positive responses in 1988-89. Overall, Van Hise Elementary parents continue to be well satisfied with their school.(Table 11) Over 90 per cent were satisfied with the over-all quality of education and the teaching of basic skills. More than eight out of every ten parents expressed satisfaction with the individual attention their child receives, while more than seven out of ten gave positive ratings to the extra allocation provided by the Board of Education to support integration and to the principal's responsiveness to parents' concerns. These findings have remained stable over the three surveys.

Table 11
Parent Attitudes Toward Van Hise Elementary School and Integration
Comparison of Three Parent Surveys

	Fall 1987 % Agree	Spring 1988 % Agree	Spring 1989 % Agree
SATISFACTION WITH:			
(a) Overall Quality of Education	96%	95%	95%
(b) Teaching of Basic Skills	91%	94%	93%
(c) Level of Individual Attention	85%	86%	84%
(d) Extra Allocation provided to support integration	66%	71%	77%
(e) Principal's Responsiveness to parent concerns	72%	73%	72%
(f) Central Office Responsiveness to parent concerns	54%	47%	54%
ATTITUDES TOWARD INTEGRATION			
I support the principle of integration	55%	65%	79%

	All Parents Fall 1987	Parents of Children in Integrated Classes Only	
		Spring 1988	Spring 1989
	% Agree	% Agree	% Agree
My child welcomed children with retardation into classroom	--	60%	90%
My child is more accepting of individual differences	--	70%	92%
Academic Expectations remain high	88%	82%	92%
Behavioral Expectations lowered	12%	10%	10%
Integration disrupts instruction	53%	39%	36%
Less Individual Attention due to integration	--	33%	23%
Psychological Distress for non-handicapped	--	31%	19%
Stress on teachers	--	29%	38%
Integration sacrifices the needs of the majority to a minority	--	40%	37%

Parent Perceptions of Integration: 1988 and 1989 Compared

Although parent perceptions of the over-all quality of Van Hise Elementary School remained stable over the three surveys, considerable changes were observed in attitudes toward the integration (Table 11, following page). Support for the principle of integration rose from 65 per cent in Spring 1988 to 79 per cent in Spring 1989. Over 90 per cent of the parents whose children were in integrated classrooms described their children as welcoming the students with retardation into their classrooms, and becoming more accepting of individual differences as a result of the integration experience. These reflect increases of 30 and 20 per cent, respectively. At least 90 per cent believed that both academic and behavioral expectations at the school continued to be high, with ten per cent more parents acknowledging the maintenance of academic standards in Spring 1989 as compared to Spring 1988.

Parental Perceptions of Problems

Although the number of parents expressing concerns over the negative impacts of integration have generally declined over the three surveys, significant issues remain. Stress on teachers (38%) and classroom disruption (36%) were each identified as problems in Spring 1989 by substantial minorities of parents. The perception of stress on teachers showed an increase (9%) from Spring 1988 to Spring 1989. Two other issues, a decrease in individual attention (23%) and psychological distress (19%) for non-handicapped children continue to be raised, although approximately ten per cent fewer parents identified these as problems in 1989 as compared to 1988.

Experiences of Children in Integrated and Non-Integrated Classrooms Compared

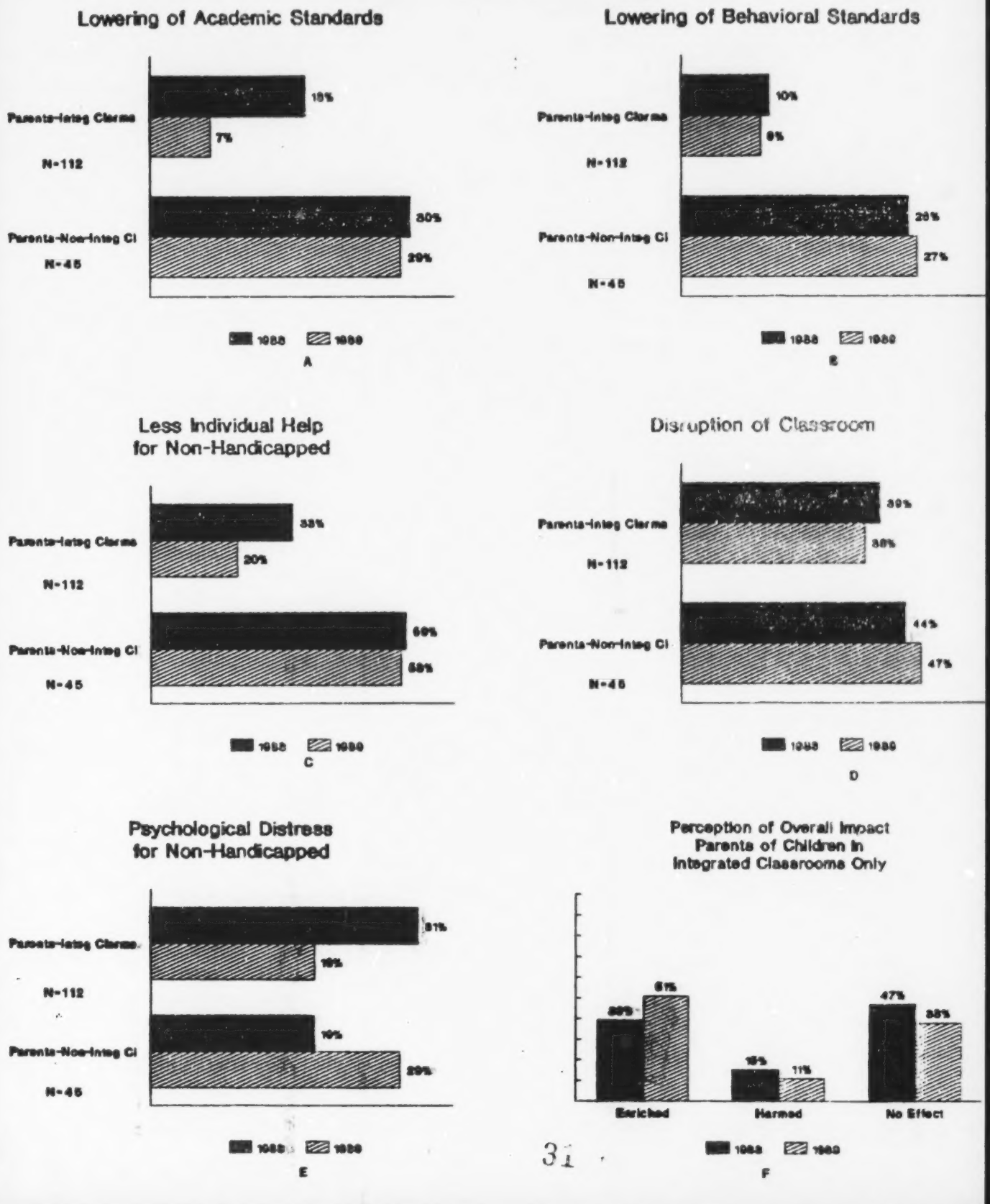
A phenomenon identified in the 1988 evaluation, a more positive attitude from parents whose children were in integrated classrooms compared to parents whose children did not have this experience, emerged even more strongly in the second year at Van Hise. Figures 1A through 1E show the responses, from the two year-end surveys, to a series of questions measuring potential parent concerns: maintenance of academic and behavioral standards, individual help, classroom disruption and psychological distress. The graphs present data for two groups of parents: those with children in integrated classrooms and those with no children in integrated classrooms. Three major findings emerge:

(1) In both years, the parents whose children experienced integration were less likely to perceive problems than those whose children had not been in integrated classrooms.

(2) Among the parents of students in integrated classrooms, there were decreases, of at least 10 per cent over the two years, in the perception of problems in four of the five areas measured.

(3) There were virtually no changes, over time, in the level of problems anticipated by parents whose children were not in integrated classrooms. In every case, the anticipated concerns of parents with no children in integrated classrooms were worse than the reported experiences of parents whose children were in integrated classrooms.

Figure 1
Parental Perceptions of Problems for Non-Handicapped Students
Comparison of Parents With and Without Children in Integrated Classrooms
Van Hise Elementary School -- 1988 and 1989



Finally, as can be seen in Figure 1F, there was an increase, between the two years, in the numbers of parents of non-handicapped children who reported that the integration experience had enriched their child's education. Half the parents in 1989, compared to 39 per cent in 1988, rated the experience as enriching. There was a corresponding decrease in the proportions who felt the experience was harmful (11% vs 15%) or had no effect (38% vs. 47%)

Staff Perceptions

Staff perceptions of the impact of integration on non-handicapped students were obtained from two sources: interviews with teachers and the Integration Impact Scale complete by teachers and HCA's. Data from the Integration Impact Scale in 1989 can be compared with similar data from the first year of the Van Hise pilot (Table 12).

Almost half the general education teachers and all exceptional education teachers described the impact on the non-handicapped students as one of the major successes of integration. Positive impacts noted by teachers included increased sensitivity of students to individual differences, the ability to be more accepting of others; greater comfort in relation to children with disabilities, and efforts to reach out. Several teachers saw the experience as helping all students to accept their own abilities and disabilities, including difficulties in learning.

> *A middle school teacher:* "The kids were magnificent with them, willing to help and take responsibility for others".
>
> *A primary grade teacher:* "The regular ed kids are very accepting of differences. There's less teasing here than at other schools."

Some teachers found that integration affected over-all classroom climate

> *A primary teacher:* "The kids are much less competitive this year; we're all in this together.
>
> *An intermediate teacher:* "I've used cooperative learning this year. It's improved the whole instructional climate."

Responses to the Integration Impact Scale generally corroborate the information from interviews. As can be seen in Table 12, large majorities of all staff agree that as a result of the experience with integration, non-handicapped students developed more comfort with and acceptance of people with differences and became more caring and sensitive to individual differences. The number of staff endorsing these statements increased considerably from 1988 to 1989.

Negative Effects on Non-Handicapped Students

The primary negative impacts of integration on the non-handicapped children stemmed from the disruptive behavior of some of the children with retardation. During the first year of integration at Van Hise Elementary, more than half the teachers responded that the non-handicapped students were upset or distracted

Table 12
Effects on Non-Handicapped Students
Staff Perceptions -- 1987-88 and 1988-89

	1987-88 Van Hise Elem. Genl. Ed Tchrs % Agree	1988-89 7 Schools Genl. Ed % Agree	EEN % Agree	HCA's % Agree
Positive Impacts				
Developed greater comfort with students with retardation	69%	93%	78%	88%
Became more caring of students with retardation	62%	91%	89%	62%
Became more sensitive to individual differences	62%	93%	100%	100%
Developed greater acceptance of people with differences	54%	100%	100%	94%
Negative Impacts				
Frequently upset by behaviors of students with retardation	54%	13%	0%	44%
Distracted by inappropriate classroom behaviors	54%	13%	0%	50%
Less attention from teachers due to time spent with retarded children	38%	0%	0%	19%

by the inappropriate behaviors of some of the students with retardation. Similar proportions of HCA's at the seven schools identified these problems in the second year of integration . However, only a small proportion (13%) of general education teachers in the second year expressed concerns that non-handicapped children were distracted by the disruptive behavior of the integrated children or by conversations between the children with retardation and their HCA's. Finally, two teachers mentioned a problem of confusion among the non-handicapped students with respect to differences in levels of expectations for themselves and for the children with retardation.

As noted previously, between one-quarter and one-third of the parents of the Van Hise Elementary regular education students felt that less individual attention was available to non-handicapped students because of the amount of teacher time spent with the students with retardation. This concern was shared by some Van Hise Elementary teachers (38%) in the first year of integration, and a small number of HCA's (19%) in the second year. However, none of the general or special education teachers responding to the Integration Impact Scale in the second year believed that integration had reduced the amount of individual teacher attention for general education students.

Attitudes of Non-Handicapped Students

During the pilot year of integration at Van Hise, in addition to parent and staff perceptions of the attitudes of the non-handicapped students toward students with retardation, data were gathered on the attitudes of the students themselves. Using the Voeltz Acceptance Scale, responses of Van Hise Elementary students in integrated classrooms were compared with responses of Van Hise Elementary students in non-integrated classes and with students at a matched school where there were no students with retardation. Scores on the Voeltz Acceptance Scale at the beginning and end of the school year indicated that general education students who had spent a year as classmates of students with retardation had significantly more positive attitudes toward students with retardation than did children in non-integrated classes at Van Hise or children at the comparison school.

In 1988-89, attitude data was collected from eight 6th grade classes at Van Hise Middle School. The Voeltz Acceptance Scale was administered to the students in November and May by Thomas C. Claridge, a teacher at Van Hise Middle School.* In two of the classes, defined as "high contact," seven students with retardation were integrated. Students in the other classes had only minimal contact with the retarded children. No significant differences were found between the high and low contact groups at either pre- or post-test. Moreover, the scores for both groups remained essentially stable over the 6-month interval. In interpreting the results, Claridge suggests that "there may not have been a great enough difference between the presumed high and low contact groups," with the high groups having only 45 minutes more contact per day. Finally, Claridge cites previous research which indicates that mere physical proximity, in the absence of systematic interventions to promote positive social interactions (such as Circle of Friends), does not produce positive consequence for interaction or attitudes.

*These data are from a paper by Thomas C. Claridge, a teacher at Van Hise Middle School, submitted in partial fulfillment of the requirements for the degree of Master of Science, University of Wisconsin-Madison, 1989.

V. THE TEACHERS

The Collaborative Relationship

Perhaps the most critical element in the success of integration of students with mental retardation into regular education classrooms is the relationship between the general and special education teachers. When these professionals view each other as partners in the enterprise and are able to trust and communicate with each other, integration is successful, regardless of the grade level or level of handicap of the child.

The general education teachers who participated in the integration program represented a range of experience in working with special education students, as well as varying levels of interest in participating in integration. All of the teachers had worked with some special education students in the past. However, four had no previous experience teaching children with retardation. Five of the 16 teachers had volunteered to participate in integration; the remainder had agreed to integrate children into their classrooms in response to requests from principals or EEN teachers

Patterns of Collaboration: General Education Teachers

Because integration in the MMSD is a developing service delivery model, with few clear guidelines, teachers were able to develop patterns of collaboration which met their own needs. The collaborative arrangements reflected the teachers' comfort in working with students with retardation, as well as their attitudes toward teaming. Half the general education teachers (all at the elementary level) described themselves as sharing responsibility for the integrated children with their collaborating EEN teacher. However, the meaning of shared responsibility ranged from extensive involvement in the child's instructional program to conveying an attitude of membership in the class. Five of the 16 teachers reported that they spent as much individual time with the EEN students as with other students in their class. The remaining teachers all spent less time with the integrated children than with their other students.

Four general patterns of teacher collaboration were identified through analyses of the teacher interviews. These are described below.

Active Collaborators

These general education teachers chose a high level of involvement with the handicapped children. They wanted to be viewed by the integrated students as "their teachers". Seven of the 16 general education teachers are in this group. All had extensive prior experience working with handicapped students and most were in the primary grades. These teachers valued the teaming process and saw themselves as benefitting professionally and personally from the experience. Active collaborators were usually aware of the student's IEP goals and had taken some initiative for collaborating in adapting or modifying the regular curriculum to meet the student's developmental level. Five of the seven active collaborators reported spending about the same amount of individual time with the EEN students as with any other student in their classroom.

A primary-grade teacher: "I have chosen to teach them as much as possible...I do most of the reading and math; she does computer, domestic, community."

An intermediate-grade teacher: "I worked with [student] on some of her own work [parallel curriculum]. I want all the children to understand that I'm her teacher too."

An intermediate-grade teacher: "She is responsible for language arts and math [for the EEN students] although we shared one literature unit and she taught a unit to the whole class, while I taught a unit to the EEN children. She handles their IEP goals; I handle social interaction, class climate, provide an opportunity for academic and social interaction"

A kindergarten teacher: "I love to team. I'm less isolated as a teacher. I gain from adult relationships"

Most of the Active Collaborators were satisfied with their experience in integration. For one teacher, however, a mismatch in philosophy and teaching style with the EEN partner resulted in a difficult year.

Limited Partners

These three teachers wanted to involve the integrated students in their classrooms, but tended to see the process as an accommodation of the EEN students to their environment. They had minimal interest in the IEP goals, spent less individual time with EEN students than with other members of their class and relied on the EEN teacher and HCA to effect the connections.

An intermediate teacher: I check-in with [EEN teacher] a lot, let her know what help [student] needs and she gets the help during tutoring time."

These teachers had only mildly retarded students integrated into their classrooms. They were relaxed about integration and generally content with the arrangements. Although they had some ideas about ways in which they could increase the students' feelings of inclusion in the classroom, they did not see the need for major changes. They all, however, questioned the appropriateness of integration for children with moderate or severe retardation.

Ready for More

These four teachers approached integration cautiously, but experienced some change in attitude over the year. They did not want to "compromise their [general education] programs" or assume too much responsibility for the children with retardation. They were willing to accept the MR students and accompanying adults into their classrooms. At the start of the year, these teachers were unsure about how children with retardation functioned as learners. Some were concerned about the potential for disruptive behavior.

For most of the year these teachers were satisfied with having the EEN teachers or HCA's provide the parallel or modified instructional programs. Their own

interaction with the EEN students was limited. They spent less individual time with the integrated students than with other students in their class. By year's end, however, these teachers had developed greater comfort levels with the students with retardation. They were frustrated by the limited interaction they had with students who had become members of their classroom community,. Although they were not ready to become full partners, they were searching for more meaningful interaction with MR children, while being careful to set limits on their involvement. "Ready for More" teachers want more information about the learning styles of children with retardation. They looked to their EEN colleagues for help in learning to work with students with retardation. Most of these teachers had at least some moderate to severely handicapped students in their classes.

> *An intermediate teacher:* "It's too bad we can't build on this experience. I've learned some things, but I won't be able to use them because I won't have any MR children next year."
>
> *A middle school teacher:* "I feel a little guilty about not doing more with them, but I take my cues from [EEN teacher]. She would tell me if things weren't OK. I liked having them here. I wish I related better to them and they to me. If I have them next year I'd like to know more about their handicaps, their abilities

Rent-a-Space

The two teachers in this group saw their role as providing an environment in which the retarded students could have the opportunity for observing and/or interacting with non-handicapped peer models.

> *A primary teacher:* "It was stated to me that it wasn't my responsibility to program for these children. All I had to do was provide the environment."

These teachers set strict limits on their involvement: willing to have the EEN children in their classrooms so long as it did not mean additional responsibilities. They pointed out the many special needs among their "own" students which required extra attention. These teachers believed that EEN teachers, with low student/teacher ratios, should retain total responsibility for the integrated students.

One of the teachers in this group was satisfied with the experience but did not see the EEN teacher as having a role in the general education classroom. There was also concern about the future direction of integration.

> *A middle-school teacher:* "She [EEN teacher] has been wonderful. . . but my kids don't feel she's their teacher. If they want to integrate there have to be adequate resources. They shouldn't "dump" these kids in the regular classes."

The second teacher had an unsuccessful experience with integration. She had many philosophic doubts about the appropriateness of the program, as well as difficulties in establishing a satisfying collaborative relationship.

Patterns of Collaboration: EEN Teachers

As the regular education teacher must identify the extent of his/her involvement with the EEN students, so the EEN teacher must identify the parameters of the relationship with the general education students. Almost all of the EEN teachers expressed a commitment to contributing to the life of the classroom in which their students are integrated. By working with general education students or sharing teaching or behavior management strategies with their colleagues, EEN teachers try to reciprocate for time the regular education teacher spends with the retarded students. Although not all of the EEN teachers were able to spend as much time in the integrated classroom as they hoped, they identified increased involvement in the regular education classroom as an important goal.

> *A middle school teacher:* "I really feel good when some of my adaptations can be used for the lower functioning kids in the [general education] class."
>
> *An elementary teacher:* "Some of the teachers don't know how to interact with MR and don't feel comfortable with them. I wish I could be in the classroom more [instead of the HCA] . The program would be smoother if I could check in daily, adapt if needed. But I have self-contained students too. It isn't always possible for me to touch base in the regular classroom."

At the elementary level, almost all EEN teachers reported at least some direct involvement with regular education students. They were most frequently involved in helping individual students during quiet work time. However, four of the six teachers provided instruction to mixed small groups of EEN and regular education students; several taught occasional lessons to the entire class. One EEN teacher was a member of a first-grade team that developed a social studies curriculum where students rotated through teaching stations. EEN students were included in the groups but were not always working with the EEN teacher.

At the middle school-level, EEN teachers primarily provided classroom support and adapted materials for their own students. They were available to provide help to individual students during work time, but did not teach small groups or a whole class lesson, as did the elementary teachers.

Satisfaction with Collaborative Relationship

Both general and special education teachers were generally satisfied with their collaborative relationships. Although there were various suggestions for improvement, only three of the 16 general education teachers and two of the nine EEN teachers described themselves as dissatisfied.

General Education Perspective

Among general education teachers, satisfaction depended primarily on the match between the teacher's expectations for his/her role and the degree to which the situation matched those expectations. Satisfaction was not related to the student's degree of handicap or to the amount of interaction with the

integrated students. The extent to which the special education teachers perceive and are able to be responsive to their general education colleagues desired level of involvement is an important factor in satisfaction.

Seven general education teachers described themselves as very satisfied and five as somewhat satisfied. One teacher who had two EEN collaborators was very satisfied with one relationship and somewhat dissatisfied with the other. Teachers who described themselves as "somewhat satisfied" tended to express frustration with the limits of the experience. Either they wanted more participation from the EEN teacher in the general education classroom or guidance from the EEN teachers regarding expansion of their roles with the EEN students. Teachers asking for more involvement of the EEN teachers in the regular classroom recognize the limits placed on EEN teachers who have multi-classroom responsibilities. Nonetheless, they see increased participation as an indication of commitment to a teaching team. One teacher suggested that both the general and special education teachers' names be on the classroom door.

The general education teachers interested in increasing their involvement with the EEN students are looking for guidance from the EEN teachers on appropriate roles and teaching techniques.

> *An intermediate teacher:* "Over the year I have grown in the amount of time I spend with the EEN kids. The EEN teacher has worked with regular ed. They feel comfortable with her."
>
> *A kindergarten teacher:* "I need to know what the child's limits are. There are different expectations for progress in regular ed and EEN. EEN looks for small progress, we expect giant progress. We both need to adjust expectations."

Four general education teachers* expressed some dissatisfaction with the collaborative relationship. Dissatisfaction was associated with several different issues. For two teachers, there was insufficient collaboration:

> *An intermediate teacher:* "We met only once. We don't have sufficient joint planning time. She is responsible for a self-contained group and doesn't have much time to be in my room."
>
> *A kindergarten teacher:* "When the EEN teacher doesn't come in I miss the feedback on the child's progress. I appreciate it when the EEN teacher touches base daily, monitors progress and backs me up."

Another teacher was dissatisfied with the expectation for too much involvement.

> "She should be totally responsible for these kids. I felt she made too many demands on me to meet and plan for them. I have to plan for a whole class, correct papers; she has only a few students."

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*The four include one teacher with 2 EEN partners who was dissatisfied with one, very satisfied with the other.

The fourth teacher who was dissatisfied was in a situation characterized by a significant mismatch of mutual expectations and teaching styles.

EEN Perspective

Seven of the EEN teachers described themselves as very or somewhat satisfied with their relationships with general education teachers, while two were somewhat dissatisfied. Two major areas for improvement in the collaborative relationships were identified.

Better Coordination of Programming: Many of the EEN teachers want more planning time with regular education teachers. They believe that in order for integration to be successful, teachers must share information about philosophies and teaching styles. EEN teachers feel they need more information about the classroom curriculum in order to coordinate instruction. Several teachers commented on the difficulty of adapting materials when lesson plans were not available in advance. EEN teachers frequently had to adapt curriculum "on the spot", reducing the quality of instruction.

Greater Involvement of General Education Teachers: The majority of general education teachers have limited awareness of the students' IEP's and, consequently, minimal involvement with the students. EEN teachers believe that greater information would facilitate greater involvement.

> "If she knew what their IEP goals were she could participate with them more."
>
> "I wish she would show more interest in the progress they are making."
>
> "If she took the time to review the IEP and she would understand why the student is integrated."

Relationship Equity Many of the EEN teachers feel indebted to the regular education teachers for welcoming their students into the classrooms and are seeking ways to reciprocate. Others are frustrated with the limited time they are able to be in the regular education classroom to support the students and the regular education teacher.

> "I would like to be able to give [something] back. They have opened their doors for me and there's not a lot I have been able to give them."

Involvement of General Education Teachers in Instruction of EEN Students

The general education teachers were at different stages of development in their experience and comfort with handicapped students. The extent of their involvement with the integrated students in their classrooms reflects these stages. Two of the teachers were trained and certified in both regular and special education and were quite comfortable with the levels of functioning and IEP objectives of their integrated students. Two teachers had participated in extensive integration during the previous school year and four others had

extensive experience "mainstreaming" special education students, although not all had worked with children with moderate retardation. Four of the teachers had minimal or no previous experience with children with retardation.

Most general education teachers perceived their role in integration as providing an environment in which the students with retardation can expand their social experiences. As a consequence, they were often not involved with the IEP process which guides the instruction of the integrated children and were minimally aware of the academic progress made by the students.

Five of the 16 general education teachers described themselves as familiar with students' IEP's. These teacher had either participated in setting some of the IEP goals or were working on IEP goals which meshed with their classroom curriculum. Six of the teachers indicated that they had seen the IEP's but did not address IEP goals in their interaction with the child. "My goals are social interaction. I'm not really aware of the IEP." The remaining five teachers had no awareness of the student's IEP's: "I don't get involved with that"; the "HCA monitors the IEP and carries feedback to the EEN teacher.

Although they did not seek involvement with the IEP process, several teachers commented on the importance of working with the children with retardation so that "they view me as their teacher and the other children know that I am their teacher too." Elementary teachers were more likely to become involved with the EEN students than were teachers at the middle school. The middle school teachers were not asked by their EEN colleagues to take much responsibility for the students. Occasionally the classroom teachers would correct papers (for the mildly handicapped students) or in class discussions ask questions framed specifically for the student. For part of the year, one middle school teacher worked individually for an hour a week with a mildly retarded student.

Administrative Support

A. Principals

Integration has been described as "being out on a frontier, without a lot of guidance or clear expectations." Many teachers accepted this challenge; indeed several had sought it. When asked directly about their principal's support for their efforts in integration, the majority of teachers responded that they had received no particular support. Teachers were divided between those who felt alone on the frontier and those who were comfortable with their independence. Only two of the teachers described their principals as providing enthusiastic support for integration.".

> *A kindergarten teacher:* "I love his attitude, the way he relates to the children. He sees integration as an opportunity for chalienge."
>
> *A primary grade teacher:* "He's a real advocate. . . He comes to the class. . . tries to do whatever I ask him."

Although most teachers did not express dissatisfaction with the level of principal support, almost all of them indicated a desire for greater principal involvement. Teachers want principals to spend more time in the classrooms,

be more aware of the daily operation of the program and more involved with specific problem solving. Principals are viewed by teachers as the best advocates for integration within their buildings, able to provide leadership in reducing fears or hostility toward integration. In buildings were integration is not supported by regular education colleagues, general education teachers report feelings of isolation and expressions of hostility from colleagues. In these situations, in particular, the support and reinforcement of the principal is critical. As one teacher said: "We have had visitors to this program from all over the state and country, but no one from this school has ever been in my classroom to observe the program."

B. Central Office Administrators

Although several teachers expressed appreciation for the responsiveness of central office administrators to requests for additional allocations, they did not identify central office administrators as a source of support. Similar to the findings about principals, central office administrators were described as rarely visiting programs and not sufficiently informed about the specifics of programs. Teachers want more leadership from central office in setting program direction, specific problem solving and in-service preparation for both EEN and general education staff.

Other Staff

Although individual teachers commented on the helpfulness of Program Support Teachers, occupational therapists, physical therapists and one psychologist, no particular professional group emerged as a major source of support for the teachers involved in integration. This was consistent with the findings in the first year of the pilot. Several EEN teachers commented on the change in the service delivery of speech and language, occupational therapy and physical therapy as a result of integration. There is a loss of opportunities for EEN teachers to team with these professionals and some increase in the level of consultation as compared with direct service.

Benefits for Teachers

Integration was intended to enhance the education of handicapped students. That many of the teachers found it salutary for themselves was an unplanned for but rewarding outcome. EEN teachers, as well as their students, experienced increased acceptance and inclusion in the school community.

> "The special ed staff feels more integrated. I feel good when I can contribute [a curricular adaptation] that helps low regular ed kids."
>
> "We and them is gone. We are all staff with strengths and weaknesses in our teaching. We realize that our [EEN] and regular ed objectives are the same - to provide the best education for all students."
>
> "There is more camaraderie between regular and special ed staffs."

Both general and special education teachers report positive impacts on their teaching as a result of working with children from a wider range of abilities.

A primary general education teacher: "Intellectually, this is the best in-service I've ever attended. It has been good for me as a teacher to re-evaluate my skills, learn how to communicate with other students, other adults."

A primary teacher: "For me it has been important to realize how difficult and frustrating it can be to work with EEN students. EEN teachers don't get much feedback from their students. They [students] can do something right for five days and then not do it on the sixth day. You wonder if you've taught them anything."

An EEN teacher: "It helped me to have a more realistic view of my [EEN] students by comparing them with regular ed; I get more idea of the normal rate of development."

An EEN teacher: "Expectations for special ed kids from parents and teachers go up because we see the kids in settings where expectations are higher."

Participation in integration was not without its emotional costs. Regular education teachers, in particular, talked about the risks involved in accepting this challenge. They reported anxieties about their own responses to the children with retardation; concerns about having other adults in their classroom and uncertainty about expectations for themselves.

A kindergarten teacher: "Even though I had been mainstreaming children for many years, I had a gnawing stomach ache; trying to get over my negative response to extreme physical handicaps; learn to accept those feelings. I'm not sure how to be comfortable with handicapped. I needed to learn not to feed into their helplessness, to treat them like everyone else, have expectations for them."

A middle school teacher: "I was scared. I'd never known any MR children I didn't know what to expect. I feared that I would be left alone with them and wouldn't know what to do. Even though I was reassured [that I wouldn't be left alone] . . you have feelings, anxieties about your own competencies. Its a developmental thing I guess. You have to experience it and learn that you can do it."

An intermediate teacher: "I didn't want my turf invaded, my kingdom upset. I needed to know that my regular students wouldn't be compromised. My program has been enhanced, not jeopardized. I'm glad I did it."

An intermediate teacher: "I needed to understand the goals for me; what concrete goals the students had, so I would know if I were being successful."

VI. HANDICAPPED CHILDREN'S ASSISTANTS

Handicapped Children's Assistants (HCA's) are the linchpin of integration. Their role is to support the integrated student in the regular education classroom, implementing programs which have been prepared by the EEN teacher and assisting the student in his/her learning activities. Many general education teachers value the HCA's not only as "experts" on the integrated students, but as members of the classroom team.

> *A kindergarten teacher:* "I couldn't do it without [HCA . When she's not there it falls apart. Without her [student] would have been a "belly flop."
>
> *An intermediate teacher:* "She knows these kids better than I do; I trust her judgment about what's appropriate for them."
>
> *An intermediate teacher:* "She is not isolated with the EEN students. She helps other kids, pulls discussion on problem solving. The kids feel comfortable with her. We're a team."

How the HCA's Spend Their Time

Because of the range of integration plans for students, there were many different allocations of responsibilities among the HCA's*. Table 13 shows the proportions of time spent by the HCA's in various activities. As can be seen from the table, approximately half the HCA's (N=8) worked exclusively in regular education environments, with two others spending less than ten per cent of their time in EEN classrooms. In contrast, one-third of the assistants spent 20 per cent or more of their week working with students in special education classrooms. These were HCA's who had split assignments.

Most of the assistants spent little time in community-based activities. Those who reported significant amounts of work in the community, not surprisingly, had the lowest proportions of time in the regular education classrooms.

There was a considerable range in the amount of time HCA's spent consulting and planning with teachers, support staff and other assistants. Three-quarters of the HCA's had less than 10 per cent of their time available for consulting and planning, with one-third reporting less than an hour each week and half reporting less than two hours a week available for consulting.

Diversity characterizes the amount of time HCA's spend assisting teachers with materials preparation and other clerical tasks. Four of the 15 assistants spent over 20 per cent of their time preparing materials and doing clerical work; whereas half the HCA's spent less than ten per cent of their time on these tasks.

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*All data reported in this section are from the semi-structured questionnaires completed by 17 HCA's. Time logs from two of the 17 questionnaires were not usable. Therefore, the time data is based on responses from 15 of the 17 HCA's.

Table 13
Handicapped Children's Assistants Allocation of Activities
Per Cent of Time

HCA	Reg. Ed. Setting	EEN Setting	Community	Planning/ Consulting	Materials Preparation/ Clerical	Lunch/Recess Bathroom
A	62%	--	--	8%	22%	8%
B	65%	--	--	3%	24%	8%
C	92%	--	--	2%	6%	--
D	80%	--	10%	3%	7%	--
E	79%	--	3%	5%	13%	--
F	58%	--	10%	17%	15%	--
G	54%	9%	9%	6%	23%	--
H	67%	22%	3%	--	--	7%
I	68%	6%	--	20%	6%	--
J	38%	--	19%	15%*	3%	25%
K	40%	--	--	5%*	55%	
L	25%	20%	20%	25%	10%	
M	16%	55%	3%	8%	16%	2%
N	39%	39%	--	4%	18%	--
O	18%	20%	39%	10%	3%	10%

*Planning/consulting time spent with BBN teacher, general education teacher, support staff and other HCA's. Approximately half the planning/consulting time is spent with BBN teachers: the other half divided among all other staff. Consulting with other HCA's was during lunch hour.

HCA's Work with General Education Students

Although the HCA's primary task is to support the integrated student(s), most regular education teachers prefer that HCA's not be segregated with the students with retardation. General education teachers appreciate the flexibility with which HCA's can be integrated into classroom life, helping general education students during quiet worktime or working with small "reverse mainstreaming" groups.

Fifteen of the 17 assistants reported that their general education teacher was receptive to them working with all students and that they had done some work with regular education students during the year. In the week prior to the survey, 12 HCA's had assisted general education students on individual assignments, while 7 had worked with small groups, usually in "reverse mainstreaming".

HCA's do not spend significant amounts of time working with general education students. In the week prior to the survey, half the HCA's had spent less than 30 minutes working with general education students. Only two reported assisting for more than two hours with non-handicapped students. Moreover,

HCA's assigned to more severely handicapped children spend most of their time directly supporting these children. As the level of handicap of the integrated student decreased, HCA's became more available for assisting with general education students and a more integral part of the classroom team. From the perspective of the regular education teacher, the assistance that the HCA is able to provide to regular education students enhances the equity of the relationship between general and special education in integration.

HCA'S Preparation for Working in Integrated Settings

The majority of HCA's reported adequate preparation for working in the integrated classrooms. More than half (56%) stated that they were very adequately prepared and another 25% were somewhat adequately prepared. The types of preparation provided and the percentage of HCA's reporting each type are shown in Table 14.

Table 14
Types of Preparation for Integration Reported by HCA's

Types of Preparation	Per Cent of HCA's Reporting
Regular on-going consultation with EEN teacher	100%
Reviewed instructional strategies for my student	95%
Reviewed behavior management strategies	88%
Reviewed student's IEP	75%
Reviewed over-all goals and program philosophy	69%
Reviewed regular education curriculum with regular education teacher	50%

Daily support and communication from both the EEN teacher and the general education teacher were mentioned by two-thirds of the HCA's as the most important elements contributing to a successful experience. A number of HCA's noted the importance of being treated with respect as a professional member of the team.

Problems Encountered by HCA's in the General Education Classroom

The HCA's were approximately evenly divided among those who had few or no problems and those who experienced considerable problems in their assignments. (Table 15).

Table 15
Number of Problems Reported by HCA's

# Problems	# HCA's Reporting	# Problems	# HCA's Reporting
None	7	Four	4
One	1	Six	1
Two	1	Eight	1
Three	2	Total	17

Two problems were mentioned by almost half the HCA's: (1) inadequate space for their students in crowded classrooms and (2) the need to keep the students with retardation quiet in order to prevent disruption of instruction. No other problems were identified by more than one-fourth of the assistants.

Table 16
Types of Problems Encountered by HCA's

Problem	HCA's Mentioning	
	N	%
None	7	41%
Crowded classrooms	7	41%
Keeping students quiet	7	41%
Inadequate space for storage of materials	4	24%
Number of students I work with	4	24%
Inadequate supervision from EEN teacher	4	24%
Insufficient advance information about lessons to facilitate adapting	4	24%
Inadequate preparation time	3	18%
Negative attitude of general ed students	2	12%
Negative attitude of general ed teacher	1	6%
Number of classrooms I work in	0	0
Supervision from regular ed teacher	0	0

Problems in Relation to Student Characteristics

Table 17 shows the relationship between selected student characteristics and the level of problems reported by HCA's. Only one clear relationship emerges: an inverse relationship between number of problems reported and the percentage of moderate/severely retarded students with whom an assistant works. Although assistants who report four or more problems have a slightly higher proportion of students with "significant behavior problems", the differences are too small for generalizations. There were no relationships between number of problems reported by the HCA and the student's grade level or the HCA's case load.

Table 17
HCA Reported Problem Level in Relation to Student Characteristics

Problem Level Reported by HCA	Per Cent of Students with: Behavior Problem	Mild Retardation	Moderate/Severe Retardation
Low (0-1)	23%	49%	86%
Moderate (2-3)	25%	60%	50%
High (4 or more)	37%	48%	32%

Problem Level in Relation to Time in Integrated Classrooms:
Table 18 shows level of problems reported by HCA's in relation to the amount of time they spent in integrated classrooms. As can be seen in the table, when HCA's who spend less than 25% of their time in integrated environments are eliminated (they report no problems), there is no relationship between amounts of time spent in regular education and problem level.

Table 18
Problem Level and Time in Regular Education Classroom

Problem Level	Per Cent of Time in Regular Education				
	>25%	26-50%	51-75%	76-100%	Total
Low (0-1)	3	1	3	1	8
Medium (2-3)	-	1	1	1	3
High (4 or more)	-	1	4	1	6

Types of Support Wanted
While there was no consensus among HCA's regarding the types of additional support desired, the idea mentioned most frequently (by one-third of the HCA's) was the need for recognizing the increased responsibilities and level of independence required of HCA's working in integrated environments. Increased planning time with EEN teachers was mentioned by one-quarter of the HCA's. Other ideas and the numbers of HCA's mentioning them are shown in Table 19.

Table 19
Support Needs Identified by HCA's

Type of Support	HCA's Mentioning	
	N	%*
Being treated as a fellow professional with skills/knowledge to contribute	6	35%
More planning time with teachers	4	24%
More direct service by OT's and PT's	3	18%
Opportunities to meet with other HCA's	2	12%
Opportunities to visit other programs	2	12%
Ideas on adapting materials	2	12%
Review of individual students' goals, behavior, etc.	2	12%
More observation/feedback from EEN teacher	1	6%
More information on retardation in general	1	6%

*Totals are greater than 100% because an HCA could mention more than one idea.

Teacher Satisfaction with HCA Role
Both general and special education teachers were generally very satisfied with the roles of the HCA's in the classroom and the working relationships which developed. HCA's were often described as "the key to the success of

integration" or the "pivot in the service delivery system." However, several teachers expressed concerns regarding the level of responsibility devolving on HCA's. When EEN teachers have students integrated into several general education classes, they cannot always be in the classroom with each student. Therefore, they are not always providing the continual direct supervision of HCA's that would be the case in a more traditional EEN classroom. Moreover, when general education teachers do not provide lesson plans in advance, EEN teachers may not be able to provide the most relevant modifications or adaptations of materials, leaving HCA's with some responsibility for adapting materials "on the spot."

Planning Time

Both EEN teachers and HCA's identify the lack of joint planning time as a significant problem. As noted earlier, half the HCA's reported one hour or less per week of planning time and only five assistants had two hours or more per week. Although almost all EEN teachers "check in" daily with their HCA's, both teachers and assistants were concerned that planning/consulting was hurried and too much "on the hoof."

VII. IMPLEMENTATION OF INTEGRATION: SYSTEM ISSUES

Consistent with the MMSD philosophy of school-based program initiatives, planning and design of the integration programs at each of the seven schools was generally school-based, within general guidelines provided by the central office. However, a number of issues have been identified by teachers which require central office leadership.

Preparation for Integration: General Education Teachers

Almost all teachers identify the need for advance preparation of staff to facilitate the transition from a more traditional program to an integrated model. Of the 16 regular education teachers interviewed, ten reported little or no preparation for integration. Teachers identify two major informational needs (1) What can I expect from these students? and (2) What is expected of me as a teacher?.

Advance Information About Integrated Students: Many of the teachers are conscious of gaps in their skills with respect to teaching students with retardation. They are seeking information on learning styles, teaching techniques and ways to assess progress. "There are differences in the way you teach regular and MR students. We have no training in diagnostic teaching or how to adapt materials." The highest priority is information on the specific students who will be integrated into a given classroom: What is the student's curriculum and behavior patterns? What are appropriate expectations for this student?. "How will I know if I'm succeeding with her?" is a question frequently-posed by general education teachers.

Expectations for Teachers: Teachers also need clarification of their own roles in integration: What changes will be required of them? What are the implications of shared responsibility?.

> *A third grade teacher:* I wondered what was expected of me, what changes I might have to make."

> *A kindergarten teacher:* "Before when I had special ed, I was the teacher and I worked with the EEN teacher and her children. Now it's more of a team. You have to give up some control. It's hard to give up control and listen to others. But it's been worth it. We're moving to more teaming. I've worked with such wonderful professionals, open, willing to take risks. They're giving so much."

Preparation for Integration: EEN Teachers

EEN teachers were divided between those who felt adequately prepared for their assignments and those who had minimal advance preparation. Several teachers had attended a workshop on integration which gave them opportunities to plan with teams from their schools. Others had initiated integration on their own and were able to control the pace of their program.

> "I've been doing this for a long time. Now it just has a different label."

"I approached the teachers. My credibility with the staff enabled me to do this."

"I'm lucky to be doing this at my own pace, out of the fishbowl."

On the other hand, there were EEN teachers who were in new assignments or had little preparation for their roles and felt overwhelming responsibility.

"I had to start from scratch. I walked in blind, I couldn't even envision what I was supposed to do. I would have liked a handbook that laid out program goals. It would have been helpful to have met the students before school started and had the opportunity to observe them in their previous classes. There was no transition for me or the students." [This from a teacher with a very successful program.]

Planning/Consultation Time

A major issue for Van Hise Elementary teachers during the 1987-88 year was the lack of sufficient planning time for implementation of integration as a new service delivery model. Teachers reported that they did not have adequate time, either before implementation of the program or during the school year, to develop an over-all service delivery model, clarify working relationships and mutual expectations and become sufficiently familiar with curriculum and procedures to facilitate modification and adaptation of materials for students.

Planning time was a somewhat less significant issue in the second year of integration, and of more concern to EEN teachers than to their general education colleagues. Six of the nine EEN teachers were dissatisfied with the amount of planning time available. EEN teachers felt they needed more planning time with both general education teachers and Handicapped Children's Assistants in order to make appropriate adaptations and/or modifications of curriculum. Only two of the EEN teachers had formal weekly meetings with their HCA's; the rest relied primarily on daily "check-ins."

In contrast to the EEN teachers and HCA's, the majority of general education teachers (13 out of 16) reported that the amount of planning time they had was adequate. Of the general education teachers who were dissatisfied with planning time, two wanted more meetings with their collaborating EEN teacher and one who felt pressured by the EEN teacher to meet after school.

Two major factors appear to have contributed to the lower satisfaction levels of EEN teachers with respect to planning time:

Whose Schedule Prevails? For most teacher pairs, planning time was organized to accommodate the schedules and expectations of the general education teachers. For example, although most EEN teachers preferred weekly meetings to review student progress, solve problems and plan curriculum adaptations, only one-third of the teacher pairs actually implemented weekly meetings. Another third of the pairs met at bi-weekly or monthly intervals, with more frequent

(sometimes daily) informal contacts. General education teachers who had minimal involvement with EEN students communicated primarily on an informal basis and rarely scheduled joint meetings with the EEN teacher.

Responsibility for Modifying Curriculum Because EEN teachers carry the major responsibility for implementing IEP goals and adapting the EEN student's program to the general education classroom curriculum, they were more likely than general education teachers to perceive the need for joint planning time. For EEN teachers who worked with several general education teachers and/or were responsible for students in both integrated and self-contained settings, management of these complex time and task demands was sometimes impossible. In the absence of formal joint meeting times, EEN teachers attempted to maintain regular contact with their general education partners, but were often frustrated by the cursory nature of the contacts.

Released Time

Although released time was available for joint planning, most of the general education teachers preferred not to use it. They were reluctant to give up classroom instructional time or spend additional time preparing for substitutes. When teachers chose not to use released time for joint planning, they met during lunch hours, after school, or during specials such as art or music. These were mutually agreed-upon arrangements.

Class Size

Students with mental retardation are not counted in teacher allocation formulas. Therefore, when these students are integrated into regular education classrooms, they increase class size without being officially acknowledged as members of the class. A number of general education teachers commented that this practice does not recognize the role of the regular education teacher in teaching the integrated child.

Role of Handicapped Children's Assistants

Although both general and exceptional education teachers reported high levels of satisfaction with the HCA's, there is concern among both teacher groups regarding the HCA's level of responsibility in the integrated classroom. A number of teachers suggested that HCA's working in integrated settings had more responsibility for teaching than was appropriate to their training and role.

Teacher Stress

During the first year of the pilot, teacher stress was a major concern at Van Hise Elementary School. All teachers, general and exceptional, as well as special subject teachers (art, music, physical education) identified high levels of stress associated with the first year of integration. The precipitous start of the integration program at Van Hise, without appropriate advance planning; lack of a clear philosophy and service delivery model; too many staff changes and the lack of sufficient support and problem solving from administrators were identified as contributing to teacher stress.

Data from teachers participating in integration at the seven schools in 1988-89 show less pervasive reports of stress. In general, EEN teachers were more likely to report increased stress than were the general education staff. This

is not surprising in view of the fact that EEN teachers have the major responsibility for developing and implementing the new service delivery model.

Among the EEN teachers, four of the nine experienced more stress in 1988-89 than during the previous year. One of the teachers was in her first year of teaching and responsible for developing the integration program at the school. A second teacher was at a new school and had personal issues in addition to the complexity of the job. A third teacher was in an unsatisfactory teaming situation, while the fourth was responsible for integrating students across a wide span of regular education grades, in addition to serving some students in a more traditional self-contained program.

Of the 16 general education teachers, ten reported no difference in the amount of stress they experienced during 1988-89 as compared to the previous year. Two reported less stress and four experienced increased stress. Of the two who reported less stress, one had a generally "easier class this year," and did not find that integration made a significant impact on stress. The other found that the contributions made by the HCA had a positive over-all effect on the working environment. Of the four teachers who reported increased stress, only one could attribute the stress directly and primarily to integration. A second teacher had personal problems which contributed significantly to the stress; the third was in a particularly complex assignment with multiple responsibilities and the fourth reported an over-all more difficult class. This last teacher, while acknowledging some increased stress related to integration, had volunteered to participate in the program, expected some increased stress, and was accepting of it.

Adequate Resources

Teachers were divided as to their satisfaction with the level of resources provided to their particular program. However, all vehemently stressed the need to provide adequate levels of resources if integration is to be successful. No specific levels of resources were identified.

VIII. The High School Program

Integration of high school students with mental retardation was begun in 1988-89 at West High School with one teacher*, one Handicapped Children's Assistant and ten students. The program was expanded in 1989-90 to include 20 students served by two special education teachers* operating as a team, two Handicapped Children's Assistants and 19 general education teachers. This section of the report describes integration at the high school from the perspective of the general and special education teachers who were involved in the program. The two special educators were jointly interviewed by the program evaluator. Information from the regular education teachers was obtained from written questionnaires sent to the 19 participating teachers. Twelve of the 14 classroom-based teachers and two of five physical education teacher returned the questionnaires. Distribution of completed questionnaires by teacher subject area is as follows:

Art	4	ESL	2	Mathematics	2
English	1	Health	2	Physical Education	2
		Home Economics	1		

The Population

Of the 20 students with mental retardation integrated into general education classes at West High School during the 1989-90 school year, 17 had mild retardation, while three had moderate retardation. One of the students had been hospitalized at a state mental health institution for many years; several students were recent arrivals in Madison from Chicago or cities in the South. The remainder had spent all or almost all of their school careers in Madison.

Numbers of Special Education/Special Needs Students

One of the major issues in integration is the number of students with mental retardation who are programmed into a single general education class. At West, the placement of students was guided by the principle of "natural proportions", wherein the number of retarded students in any one section would not exceed the number that would be expected in a random group of persons of that age level. Using this principle, only one or two students with mental retardation were placed in any one section. During the second semester of the 1989-90 school year, when the data for this report were collected, none of the general education classroom-based teachers had more than four students with mental retardation in their total classload, with the majority serving only one or two students with retardation. One physical education teacher served a total of eight students with mental retardation during that semester.

In addition to the 20 students with mental retardation, the general education teachers responding to the survey also taught students with other exceptional (learning disabilities and emotional disturbance) and "special needs". The numbers of special education/special needs students in these teachers' total classloads ranged from three to 25.

*In addition to the school-based teacher(s) serving the students with mental retardation, there is a community-based vocational teacher based at West High School. This teacher serves all students eligible (14 years old and over) for vocational training in the West attendance area.

Six of the 14 respondents felt that they had too many students for adequate instruction, but this was related to total class size as much as to the numbers of handicapped/special needs students. The majority of survey respondents indicated that they could program appropriately for two or three special education students in any one section, although one teacher felt s/he could program for five such students. Several teachers were unwilling to specify a number, indicating that it depended upon the total number of students in the section, the skills and behavior of the special education students and the skills and behavior of the other students in the class.

Instructional Programming

The instructional program for the integrated students at West was a combination of school and community-based programming. All students were integrated for home room and physical education (or health in 9th grade). Depending upon individual needs, students were integrated into classes in art (drawing/design, sculpture, art metal); home economics; general or consumer math; and English/writing workshop. There were no students integrated into science or social studies classes.

Special education teachers supported integration through direct instruction of the students, monitoring of the students in their integrated classrooms, adapting the curriculum of the general education classroom as needed, and some team teaching with the general education teachers.

Placement and IEP Goals

According to the special education teachers, students are not integrated into general education classes purely for socialization. According to the philosophy of integration, there should be an instructional objective for placing students into general education classes. Decisions about integration into specific classes flow from the instructional goals specified in the student's IEP. Students are placed in environments where they are able to successfully complete activities adapted to their skill levels, as they work toward meeting their IEP goals. For this reason, each student's IEP and resulting schedule are highly individualized.

Although the special education teachers are able to identify clear goals for each integration decision, general education teachers are often not aware of these goals. A majority of the regular education teachers at West (60%) described themselves as not at all familiar with the students' IEP goals and consequently unable to rate student progress. Only one regular education teacher described him/herself as involved in the IEP process, very familiar with the student's goals, and confident of his/her ability to rate student progress. Limited knowledge of IEP goals was also characteristic of many general education teachers at the elementary and middle schools. One effect of this limited awareness of IEP goals is a discrepancy between the general and special education teachers' perceptions of the value of integration for instruction. When teachers are aware of the instructional goals, they are more likely to have positive attitudes toward the integration for instruction.

Teacher Assessment of Integration for Instruction

The two special education teachers at West were generally satisfied with their students' instructional experiences in the general education classrooms,

although they recognized that some students learn better in the community than in the classroom.

Perceptions of the general education teachers regarding the benefits and problems related to integration are reported in Table 20. Selected effects of integration were rated on a Likert-type scale, with 4 denoting a major benefit (or problem) and 1 no benefit (or problem). Table 20 shows the average rating for each item, as well as the percentage of teachers rating the item as a major or moderate benefit or problem.

As can be seen from the Table, the reactions of the general education teachers were mixed. Large majorities of the general educators saw integration as providing significant benefits to students with retardation in terms of wider educational experiences (93%); increased social interaction (86%) and good models for work habits (72%).

Somewhat fewer teachers identified benefits in the areas of good behavioral models, improved attention and work habits and improved behavior. Lack of work completion was identified as a major or moderate problem by 43% of the teachers. When data on individual students was analyzed, we found that 11 of the 20 students were rated as completing their work almost always or at least three-quarters of the time, and only 4 students were described as completing assignments infrequently or not at all.

Table 20
General Education Teacher Ratings of
Effects of Integration on Students with Mental Retardation

BENEFITS

	Avg. Rating	% Rating Major/ Moderate Benefit
Wider educational experience	3.36	93%
Increased social interaction	3.43	86%
Good models for work habits	3.00	72%
Good behavioral models	2.79	64%
Improved attention/work habits	2.69	64%
Improved behavior	2.69	43%

PROBLEMS

	Avg. Rating	% Rating Major/ Moderate Problem
Work completion	2.50	43%
Frustrated at level of work required	2.29	36%
Classroom disruption by MR students	1.79	14%
Attendance of MR students	1.64	14%
Safety of MR Students	1.77	14%
MR students teased by others	1.36	7%

A second problem perceived by general education teachers was the integrated students' frustration with the level of work required. Slightly more than one-third (36%) of the high school general education teachers reported this as a concern. Student frustration regarding their ability to keep up with peers was not seen as a problem by general education teachers at the elementary and middle schools. However, it was a concern expressed by 44% of the HCA's at the elementary and middle school levels.

Finally, several high school teachers echoed the questions expressed by some elementary and middle school teachers regarding the overall utility of the instructional experiences for some students. For example:

> "My MR student did none of the required work; was just basically auditing the class. That's OK with me, if that's what you're trying to accomplish."
>
> "The most difficult thing is being put in the position of trying to teach subject matter and having a student who cannot relate on any level of the classroom activity."

Student Behavio

General and special education teachers had somewhat differing reactions to the level of problems presented by the behavior of the integrated students. The special education teachers identified truancy on the part of a small group of students and management of some students' disruptive behavior as a problem in integration. Among the regular education teachers, however, there were only minimal concerns expressed regarding disruption of classes by students with retardation, regular attendance by the integrated students and student safety. (Table 20)

According to the special education teachers, some of their general education colleagues were reluctant to give corrective feedback to the students with retardation or to discipline them for inappropriate behavior, because "I don't have specialized training for working with handicapped students." Team teaching for part of a class to model behavior management techniques, consulting with the general education teacher regarding strategies for managing inappropriate student behavior and periodic monitoring of the student in the general education classroom were some of the approaches used by special education teachers to assist in behavior management.

Social Experiences and Peer Relationships

Social interaction with a wide range of normal peers is one of the major objectives of integration. Toward this goal, social programming for each of the integrated students involved a network of general education students who interacted with and supported the student with retardation. For some students, this interaction was as limited as saying "hi" in the hallways; for others it involved direct assistance in the classroom or cueing to change inappropriate behavior. Seven of the students with mental retardation participated in extra-curricular activities (drama, pep club, managing sports teams) and some of the more outgoing students formed friendships with non-handicapped students.

The special education teachers were very satisfied with the level of peer relationships experienced by their students.

> "Acceptance by regular ed students has surpassed all our expectations. At [a school with a segregated MR program] we had to extract living bodies to come into our classes. Here we're spread out all over the building and we have natural integration."

Special education teachers described the integrated students as demonstrating significant improvements in personal self-care habits, levels of confidence and willingness to try new activities. Interaction with non-handicapped students has been credited as producing similar behavioral changes in integrated students at both elementary and middle schools.

A large majority of the general education teachers (86%) rated increased opportunities for social interaction, as a major benefit of integration. Moreover, very few teachers (7%) identified teasing of students with retardation by non-handicapped classmates as a major or moderate problem. (Table 20)

Effects on Non-Handicapped Students

In terms of the effects of integration on the non-handicapped students, general education teachers at the high school share the over-all positive view expressed by their elementary and middle school colleagues. Table 21 shows that two-thirds or more of the high school teachers agreed that the general education students benefitted from integration by developing a greater understanding of individual differences, showing increased willingness to help

Table 21
General Education Teacher Ratings of
Effects of Integration on Non-Handicapped Students

	Avg. Rating	% Rating Major/ Moderate Benefit
BENEFITS		
Developed greater understanding of individual differences	3.15	71%
Increased willingness to help others	3.14	71%
Initiated interaction with MR students	3.07	71%
Became more accepting of MR students	3.08	64%
PROBLEMS		
MR Students take teacher time away from other students	2.14	36%
Other students upset by behavior of MR students	1.71	7%
Safety of general education students	1.46	7%

others, having more interaction with and becoming more accepting of students with retardation. Only one problem impacting on regular education students was identified by a more than a few teachers. Five out of 14 were concerned about the amount of teacher time spent with students with retardation and not available for working with general education students. Although this latter issue was not a concern of teachers at the elementary and middle schools during the 1988-89 school year, it was identified as a problem by some Van Hise Elementary teachers (38%) in 1987-88, by HCA's (19%) in 1988-89 and by Van Hise Elementary parents (33% and 23%) in the both 1987-88 and 1988-89.

Contact with Parents

There was little contact between general education teachers and the parents of the integrated students with mental retardation. Twelve of the 14 respondents reported no parent contact; one teacher had a single contact with parents and one teacher reported communicating with parents through a bi-lingual paraprofessional.

Effects of Integration on Teachers

The effectiveness with which students with mental retardation are integrated into general education classrooms can be enhanced when appropriate support is provided to the general education teacher. Teachers at West were generally satisfied with the support available to them from the special education teachers in their building and from the ISS central office. Three of the fourteen teachers were concerned about the level of support from building administrator, although none rated it as a major problem. (Table 22)

Table 22
General Education Teachers Perception of
Support for Integration

Source of Support	Avg. Rating	% Rating Major/ Moderate Problem
Insufficient support from building administration	1.62	21%
Insufficient support from MR staff	1.62	7%
Insufficient support from ISS central office	1.31	7%

Support for Integration

Teachers were asked to rate the importance of five commonly available supports to integration. As can be seen in Table 23, teachers are most interested in frequent (weekly) consultation with the special education teacher and additional individual planning time for the preparation of modified materials. Approximately half the teachers rated each of these items as an important support for integration. No other support was endorsed by more than 20 per

cent of the teachers. In contrast to elementary schools, where educational assistants in the classroom are seen as the linchpin of integration, there appears to be little interest among these high school teachers in having assistants assigned to their classrooms to assist in integration.

Table 23
Teachers Ratings of Importance of Various Supports for Integration

Type of Support	Avg. Rating	Per Cent Ranking Item as Important
Weekly Consultation with MR teacher	3.67	50%
Individual Planning time for Reg. Ed Teacher	2.83	43%
Occasional Consultation from MR teacher	2.69	21%
MR Teacher in Reg. Ed. Classroom	2.60	21%
Educational Assistant in Classroom	2.33	14%

Communication between Special and General Education Teachers

Frequent communication between general and special education staff is identified by teachers as a major ingredient in successful integration. During the 1989-90 school year, approximately one-third of the general education teachers at West reported communicating at least weekly with MR colleagues regarding student progress and programming. Another 29 per cent communicated several times a month. The remaining teachers were equally divided between those who communicated several times a semester or less than that. A number of teachers commented on the need for increased frequency of communication, while simultaneously noting the difficulty of finding time for this contact. This is an issue which has also been identified at middle and elementary schools.

Adapting Curriculum

Adaptation of curriculum did not present significant difficulties to the general education teachers at West. Only 20 per cent of the teachers reported making major or moderate modifications in their curricula in order to accommodate the integrated students. The remaining teachers made either minor or no modifications, or varying levels of modification depending upon the particular student.

When curriculum modifications were required, they were most often made either by the general and special education teacher working together (36%) or by the general education teacher alone (36%). For students in three of the general education classes (23%), all curricular modifications were made by the special education staff. One general education teacher reported no modifications made.

Personal Impact of Integration on Teachers

Similar to the findings at the elementary and middle schools, both general and special education teachers at West High School reported positive effects on themselves as a result of their experience with integration. Special education

teachers felt more integrated into the building, more respected and accepted by their general education colleagues. General education teachers noted increased awareness of individual learning styles, in general, and mental retardation in particular, as well as greater appreciation of and tolerance for individual differences. Four of the teachers commented on how much they had enjoyed working with and knowing some "very special people." Only two of the general education teachers did not identify any personal benefits to themselves as a result of their experiences with integration.

Role of Integration in Increasing Teacher Stress

Questions have been raised as to the effect of integration in increasing job stress on teachers. Survey respondents were asked to compare the amount of job stress they experienced during 1989-90 as compared to the previous year. Five of the 14 teachers (36%) reported increased stress. However, only one of the five teachers identified integration as playing even a moderate role in increasing job stress. For three of the five, integration of students with retardation made a minor contribution to their increased stress; and for one teacher it was not a factor. Again, this is similar to results at the elementary and middle school levels where, of the four general education teachers who reported increased job stress, only one identified integration as the primary cause of this stress.

SUMMARY

This report describes the integration of 59 students with mental retardation at in the Madison Metropolitan School District during the 1988-89 school year. The major portion of the report deals with the integration of 39 students at five elementary and two middle schools. Data for this section of the report is based on interviews and questionnaires with 16 general education and 9 special education teachers; questionnaires completed by 17 Handicapped Children's Assistants; telephone interviews with parents of 36 of the 39 integrated students; sociometric data from 13 of the 16 elementary and middle school classrooms; the responses of 6th grade students' at Van Hise Middle School to an attitude scale measuring acceptance of handicapped persons and the third wave of a questionnaire completed by parents of non-handicapped children at Van Hise Elementary School.

A brief description and analysis of the high school program is provided in section VIII of the report. This section is based on interviews with the two special education teachers and questionnaires completed by 14 of the 19 regular education teachers who participated in the high school integration program.

The major findings are:

Elementary and Middle Schools

1. Integrated students are generally accepted by their classmates. Sixty-one percent receive sociometric ratings between plus and minus one standard deviation of their class means, with ten per cent rated more than one standard deviation above the class mean. Only 29 percent of the students were in the socially "neglected or rejected" range.

2. Teacher perceptions of the social positions of the students are generally consistent with the sociometric data from classmates. According to teacher descriptions, approximately 44 percent of the students with retardation engaged in mutual interaction with non-handicapped peers for at least one-third of the time; 20 per cent were classroom "pets" and the remaining 36 percent were divided between children who had minimal interaction and those who were rejected by peers.

3. On a series of questions measuring the social impact of integration on the children with retardation, average ratings on a 4-point scale, where 4 is positive were: general education teachers - 3.38; exceptional education teachers - 3.39 and handicapped children's assistants (HCA's) -- 3.12.

4. On a series of items measuring staff perception of behavioral or emotional problems experienced by the integrated students, average ratings on the 4-point scale, where 1 meant no problems were: general education teachers -- 1.58; exceptional education teachers -- 1.74 and handicapped children's assistants -- 2.23.

5. Integrated students had higher ratings of success in achieving eight IEP goals than a matched group of students in more traditional programs. Three of the differences were statistically significant.

6. Integrated students were only slightly less likely to have IEP goals in functional areas than were students in more traditional programs. However, the integrated students were more likely to be rated as successful in achieving these goals.

7. On a series of items rating the effectiveness of instruction for students with retardation in integrated classrooms, the average ratings on a 4-point scale, where 4 is positive, were: general education teachers -- 3.51; exceptional education teachers -- 3.41 and HCA's -- 3.06.

8. Despite generally positive ratings of the instructional experience of integrated students some general education teachers continue to question the overall advisability and effectiveness of providing significant amounts of instruction to students with retardation in general education classrooms. Teachers' concerns increase as the level of retardation becomes more severe and the age of the student increases.

9. Parents of integrated students were generally satisfied with their children's experiences in integrated settings: 52 percent rated the program as very successful and 40 percent rated it as somewhat successful. In describing successful aspects of the program, parents were most likely to mention improved self-esteem, improved self-care, greater responsiveness to and more interest in the overall environment.

10. On a 10-point scale measuring success in achieving IEP goals, three-quarters of the parents of the integrated students rated their student's overall success above the mid-point of the scale.

11. More than half the parents (56%) did not identify any problems associated with their child's experience in integration. Among those who did mention problems, the most frequently cited concerns were: (a) stress and frustration from expectations in the general education classroom; (b) deficits in the instructional program and (c) negative social interactions with peers. None of these problems was mentioned by more than 22 per cent of the parents.

12. Although almost all (85%) parents of the integrated students would choose an integrated program over a more traditional model, many suggest more balance between the time the students spend in integrated environments and in other instructional settings. Parents feel that decisions regarding the amount of integration should be made on a more individualized basis.

13. Parents of the integrated children tend to be more fearful of integration than their children's experience confirms. One-third of the parents reported that despite their concerns, the children seemed happier than in previous years.

14. In the Spring of 1989, 79 percent of the parents of non-handicapped students at Van Hise Elementary School were supportive of the principle of integration. This compares to slightly over half the parents in the Fall of 1987 and 65 percent in the Spring of 1988. However, 37 percent of the Van Hise Elementary parents feel that integration sacrifices the needs of the majority of students to the needs of a minority. There was little change in attitudes on this latter question over time.

15. Parents who had children in integrated classrooms were considerably more likely than parents whose children were not in integrated classrooms to have positive attitudes toward integration and less likely to identify negative impacts on the general education population. Sixty percent of the parents with children in integrated classrooms believed that integration enriched their child's education; only 11 percent saw harmful effects.

16. Overall, 90 percent of parents of non-handicapped students at Van Hise Elementary believe that academic and behavioral standards have been maintained at the school. A similar proportion agree that their child is more accepting of individual differences, as a result of the integration experience.

17. Two major concerns, each expressed by slightly more than one-third of the respondents, emerged among parents of general education students: (a) stress on teachers caused by increased responsibilities related to integration and (b) disruption of instruction by the behavior of the integrated students and/or the distractions related to the interactions of the integrated students and their HCA's.

18. Large majorities of all staff groups (general education teachers, exceptional education teachers and HCA's) rate general education students as developing more sensitivity and greater comfort with retarded students as a result of their experience with integration. Teachers see few negative effects on general education students. However, approximately half the HCA's reported that general education students are distracted and/or upset by the behaviors of the integrated students.

19. Assessment of the impact of integration on the attitudes of 6th graders at one middle school did not replicate the 1987-88 elementary school findings regarding positive attitude change following the year of integration. Several explanations for this findings were offered.

20. Approximately 80 percent of both general and exceptional education teachers were satisfied with the collaborative roles they had developed to implement integration. Involvement of the general education teachers spanned the continuum from extensive sharing of responsibility for the integrated students to providing the classroom space with minimal teacher involvement. Almost half the general education teachers described themselves as sharing responsibility with the EEN teachers. Only two of the 16 believe that the EEN teacher and HCA should have total responsibility for the integrated students.

21. All teachers identify the need for advance preparation for staff before integration is begun. General education teachers want more guidance from EEN staff as to expectations for students and teaching/learning strategies appropriate for instruction with students with mental retardation. Teachers are also looking for administrative direction regarding expectations for their roles in integration.

22. Adequate planning time is a major issue for EEN teachers -- both with the general education teachers in whose classrooms the students are integrated and with the HCA's. EEN teachers generally see more need for joint planning time than do general education teachers. The large majority of general education

teachers were satisfied with the amount of planning time available in relation to integration. Although released time was available, general education teachers were often reluctant to use such time because of the extra work involved in preparing for a substitute.

23. Teachers are divided in their experience of administrative support for integration. Several report high levels of encouragement and involvement from their principals; others feel alone on the frontier.

24. EEN teachers, as well as their students, experienced greater involvement and acceptance at their schools as a result of integration.

25. Both general and exceptional education teachers were generally satisfied with the functioning of the HCA's, often describing them as the "pivot in the service delivery system." However, the increased responsibilities and expanded roles of HCA's working in integrated classrooms is of concern to all staff groups.

26. Handicapped Children's Assistants felt generally prepared for working in integrated classrooms: 56 percent described themselves as very adequately prepared and 25 percent as somewhat adequately prepared. Daily support and communication between the HCA and EEN teacher was the most important factor in the job satisfaction of the HCA's.

27. Forty percent of the HCA's reported no problems working in integrated settings. Among those who experienced problems, crowded classrooms and the need to keep students quiet to prevent disruption of instruction were the most frequently mentioned.

28. Of the 16 general education teachers, 25 percent reported increased job stress compared to the previous year, but only one teacher attributed the increased stress directly and primarily to integration. In contrast, almost half (44%) of the EEN teachers experienced more job stress.

29. The inclusion of the integrated students with mental retardation in the class counts determining teacher allocations and the provision of adequate resources (HCA's, planning time) to implement quality programs are continuing issues which teachers feel have not been adequately addressed.

High School

30. The special education teachers at the high school identified increased student self-confidence, improved language development and greater attention to self-care as the major positive outcomes for the integrated students. Interaction with non-handicapped peers was seen as a major factor in producing these changes. Progress in instructional skill areas varied, with some students learning better in community than in classroom settings.

31. Although most general education teachers were accepting of the integration of students with mental retardation in their classrooms, many do not understand the goals for integration beyond the social experience. They express interest in obtaining more information about the expected outcomes of placements in their classes, as well as about the abilities and learning styles of the students.

32. General education teachers had very limited information about the specific IEP goals which guide the individualized programs of the students with retardation. In the absence of understanding these goals, few of the teachers feel able to rate instructional progress.

34. From the perspective of general education teachers, the major problems encountered by the students with retardation related to work completion and frustration with the level of work required. These problems were noted by approximately 40% of the teachers. Classroom disruption, attendance, safety and social rejection were seen as problems by only a small minority of teachers. Special education teachers were more likely to identify student misbehavior as a problem.

35. General education teachers identified positive social effects for non-handicapped students. Decreased teacher time for general education students, as a result of time spent with students with retardation, was a concern expressed by approximately one-third of the general education teachers.

36. To support the implementation of integration, high school teachers are most interested in weekly consultation with their special education colleagues and more individual planning time for modifying materials. Unlike elementary and middle school teachers, they do not see the presence of educational assistants in their classrooms as a major need.

37. Regular, frequent communication between general and special education teachers was identified as one of the most critical elements in producing successful integration, yet among the most difficult to implement.

38. Most of the general education teachers were comfortable adapting materials independently or in collaboration with the special education teachers. However, a few teachers noted their lack of training in adapting materials for students with retardation.

39. Both special and general education teachers reported positive personal and professional changes as a result of the integration experience. Only one teacher identified the integration program as responsible for increasing the level of job stress.